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# Original Articles.

## CARCINOMA IN EARLY LIFE.*

### WITH SPECIAL REFERENCE TO EARLIER METHODS IN INTRA-VITAM DIAGNOSIS.

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Carcinoma is usually regarded as the malignant tumor of later life, having its legitimate age limit at 35, though it is most frequently met with after 40 years of age.

With increasing study of the malignant neoplasms, age is gradually losing its hold as a criterion of difference between sarcoma and carcinoma, the former being found at almost any age, while carcinoma is beginning to be noticed more frequently during the earlier decades of life.

Having had the opportunity of examining the material from nine cases of carcinoma between the ages of 23 and 35 years, I have incorporated the same in the subject of my paper, and drawn from them such points as were of pathologic interest.

Case 1.—Mrs. A. F. R., presented herself in the private practice of Dr. L. W. Littig, who has kindly furnished the clinical data. She was admitted to University Hospital, Dec. 6, 1898, and was 23 years old, married, and had one child 3 years old. The family history as regards tuberculosis and neoplasms was negative. Her health was good to within six months of admission, after which time she had pain in the pelvic region and offensive discharge from the vagina.

Physical examination of the thoracic and abdominal organs, with the exception of the uterus gave negative results; vaginal examination revealed an indurated, warty, slightly ulcerating growth involving the cervix uteri, extending a short distance on to the anterior and posterior vaginal walls; displacement of the uterus did not exist.

A clinical diagnosis of epithelioma of the cervix uteri was proposed and operative removal advised. Following operation, Dec. 8, 1898, of abdominal hysterectomy, no unfavorable post-operative symptoms appeared, except a rather unusual interference in the complete healing of the abdominal incision, by the appearance, a short time after the operation, at the site of suture wound, of a papillomatous, granuloma-like growth which gradually increased in size and within five months presented a warty ulcerating growth the size of a lemon, which had all the macroscopic characteristics of a surface carcinoma or epithelioma. This growth was removed by a second operation on May 11, 1899.

The examination of the uterine growth revealed a complete involvement of the cervix uteri by the tumor mass, which presented a histology of delicate fibrous stroma separating irregular, narrow bands or rows of pavement epithelial cells, the latter showing numerous karyokinetic figures, and at the edges of the tumor area, indications of extensive infiltration into the muscular structure of the corpus uteri. The diagnosis was carcinoma.

The microscopy of the secondary growth removed from the site of abdominal incision presented a similar arrangement of large, irregular alveoli of pavement epithelial cells, enclosed by a delicate fibrous connective tissue stroma like that in the primary growth.

Case 2.—This case was in the service of Dr. J. C. Shrader, at Mercy Hospital, in Mrs. M. G., aged 26 years, married, with no children. Her family history as regards cancer was negative. Her general health was good, but during the past five years she had been annoyed by pruritus of the external genitals, accompanied by the slow development of a warty, ulcerating growth at the point of irritation.

Physical examination revealed an ulcerated, painful area on the left labium majus, with papillomatous, indurated edges, being 1½ inches long by ¾ inch in width; two enlarged lymph nodes were noted in the left inguinal region.

Operation for removal of primary growth and involved lymph nodes was performed Nov. 15, 1897, and there has been no recurrence to date.

The microscopic examination revealed the typical picture of epithelial proliferation from the surface, and formation of distinct nests or pearls of pavement epithelial cells in the deeper tissues as common to, and indicative of, squamous-cell epithelioma.

Case 3.—This case occurred in the service of Dr. J. W. Dalbey, in the University Hospital, in O. E. C., a male laborer, aged 28 years, and single. His family history as regards cancer was negative. The right lower eyelid presented an ulcerated area three-quarters by one-half inch, with proliferated edges, which, according to the patient, had been gradually developing during the past five years. This was removed by operation on July 6, 1899. primary union following and no recurrence.

Microscopy revealed irregular columns of pavement epithelial cells extending down from the surface, with well-marked epithelial nests, beneath the surface, giving the characteristic histologic picture of pavement-celled epithelioma.

Case 4.—The patient was seen in the medical service of Dr. L. W. Littig, in the University Hospital, viz.: R. R. T., aged 30 years, a farmer and single. When presented, Nov. 9, 1897, he gave a history of indefinite symptoms with reference to disturbances in digestion, and distress in the epigastric region; during the two months previous to entrance he had noticed a tumor-like enlargement below the left rib-border. There was no marked localized pain.

Physical examination of the thoracic organs was negative; in the epigastric and left hypochondriac regions a defined area of dulness was noticeable, having a transverse diameter of 3½ inches, palpation revealing a movable, circumscribed growth not influenced by respiratory movement, and separable from the hepatic and splenic areas of dulness.

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* Read before the Des Moines Pathological Society, Nov. 14, 1899.

A diagnosis of tumor abdominalis was proposed, the nature of this by reason of the age of the patient, being left indefinite, and exploratory operation advised. The latter was not granted and the patient passed from observation until death occurred, Feb. 8, 1898.

The post-mortem examination, by request of the relatives, was confined to the abdominal cavity. General emaciation was very marked; panniculus adiposis was greatly diminished. On opening the abdomen a large mass the size of a child's head was found involving the greater curvature of the stomach and the transverse colon; the mass, with adherent organs, was removed; the liver presented a high grade of fatty infiltration but no evidence of metastatic involvement; the spleen was not enlarged, and the kidneys were negative.

Closer examination of the tumor mass showed such an intimate connection with both the large intestine and the stomach as to render it difficult to distinguish from which organ it had its origin. The mucous surface of the stomach was smooth, the wall presenting a diffuse thickening which gradually merged into the tumor mass. In the lumen of the transverse colon extensive ulceration was noted corresponding to the tumor area.

In the microscopic section, representing a section through the mucous membrane of the stomach and into the substance of the tumor mass, the mucous membrane appears atrophic, and the tubular glandular structure is almost obliterated; in the submucosa, irregular tubules are seen, filled with cubical epithelial cells; deeper, elliptical and oval alveoli are noticeable, filled with cells, while narrow columns of cells—sometimes composed of single rows of cells—are seen radiating and infiltrating the fibrous stroma in all directions. Fatty degeneration in the larger cell collections is noted, and numerous karyokinetic figures are seen. The diagnosis was adenocarcinoma, most probably of stomach origin.

Case 5.—This occurred in a patient of Dr. W. D. Middleton, at the University Hospital, viz.: W. R., aged 32 years, also a farmer and single. When admitted, he presented a large, ulcerating growth of the right side of the face, extending down on to the side of the neck for a distance of two inches, exposing the inferior maxillary bone in several places; the growth was of two years' standing. Microscopic section of particles removed from different portions of the growth gave a typical picture of epithelioma.

Coley's mixture of erysipelas and prodigiosus toxins was used in the therapy without appreciable benefit and the patient died in the hospital, two months after entrance. An autopsy was not granted.

Case 6.—This case occurred in the practice of Dr. R. W. Hill, Davenport, Iowa, to whom I am indebted for the following: Mrs. N., aged 34 years, gave a history of several years of constipation, leading to almost complete obstruction when first observed by the attending physician. There was no emaciation, no localized pain, no distinct tumor, but a stenosis due to neoplasm was diagnosed and operation advised.

Laparotomy revealed an obstruction of the descending colon just above the junction with the sigmoid flexure, due to a neoplastic growth encircling the intestine. Resection was performed, removing about five inches of the colon and sigmoid flexure, the end of the descending colon being fastened to the abdominal wall, to form an artificial anus, while the resected end of the rectum was inverted upon itself. Death occurred five days after operation, from peritonitis.

The gross pathologic appearance of the resected portion of intestine reveals a dense tumor mass enveloping the lumen of the intestine to the extent of two inches, constricting the same so that it admits but the passing of a finger; the entire growth being about the size of a lemon. No ulceration of the mucous surface is present; the cut surface of the tumor presents a dense structure in which numerous areas of mucilaginous softening are noticeable.

Microscopic examination of a section including mucous membrane and a large extent of the growth proper, shows no change in the mucosa, but in the submucous area are noted numerous oval-shaped alveoli more or less completely filled with short columns or cubical epithelial cells. Aside from the alveoli, areas are noted which are quite devoid of cells, and are filled instead with a delicate fibrous material giving the reaction of mucin. The stroma of fibrous connective tissue shows but slight retrograde change. A diagnosis of acinous carcinoma undergoing extensive myxomatous degeneration, was made.

Case 7.—Miss G. W., aged 34 years, a dressmaker, was admitted Jan. 4, 1899, to the surgical service of Dr. W. D. Middleton, at the University Hospital. Her family history with reference to cancer was negative, and her health good until one year ago, when a small lump was noticed in the right breast, which rapidly enlarged and has been accompanied by sharp lancinating pains.

Physical examination revealed a large, rather circumscribed, slightly movable tumor mass involving the entire area of the right *mamma*; the surface about the nipple was retracted and over the gland proper, broken by numerous sinuous openings from which milky purulent-like discharge was escaping.

Operation was performed Jan. 5, 1899, comprising extirpation of the tumor and the gland, with three enlarged axillary lymph-nodes.

The cut surface of the tumor presents a growth of semisolid consistency, extending in various directions from the nipple into the substance of the gland, the size of the tumor being about that of a small cocoanut.

Microscopic sections stained in hematoxylin and eosin method, and by Van Gieson's method, reveal elliptical, oval, and irregular alveoli filled with cubical epithelial cells, surrounded by bands of dense fibrous tissue, the fibrous stroma and cell collections being about evenly distributed. The stroma presents occasional small areas of mucoid degeneration. Central areas of cells in the larger alveoli show marked granular and fatty changes. Numerous karyokinetic figures are seen throughout the cell areas. A diagnosis of acinous carcinoma was made.

On March 8, 1899, a secondary recurrent nodule, of chestnut size, was removed from the site of the scar of the first operation, and possessed the same structural characters as the primary growth.

Case 8.—This case occurred in the surgical service of Dr. W. D. Middleton; admitted Feb. 1, 1899. Mr. J. A. G., aged 35 years, married, jeweler, gave no family history of carcinoma, but a history of an attack of acute articular rheumatism of six months' duration, two years preceding admission; during this severe abdominal pain was a prominent symptom. Eight weeks previous to admission he noticed a palpable swelling just below the rib-border in the right mammary line. When first noticed it was of the size of a hen's egg, but gradually and was the site of considerable pain which radiated out into the abdomen. Emaciation and anemia were marked.

Physical examination of the thoracic organs gave a negative result. In the right hypochondriac region a palpable, movable tumor, orange-size, was felt. Percussion showed it as not separable from the liver area of dulness, and influenced by respiratory movements. There was no icterus, constipation, nor ascites. Exploratory operation was performed Feb. 21, 1899, by Dr. Middleton, and revealed, on exposure of the abdominal structures, a large tumor mass the size of a child's head, in the region of, and apparently originating in, the hepatic flexure of the colon, and adherent to the under surface of the liver and pyloric extremity of the stomach. The extensive adhesions precluded any possibility of removal, and the abdominal wound was closed after removing from the most prominent and accessible portion of the tumor two small pieces for microscopic examination. A histologic section revealed the picture of adenocarcinoma.

The patient, shortly after operation, returned to his home in northern Iowa, where death occurred within three months. An autopsy was not obtained.

I wish to add to the foregoing an interesting instance of early carcinoma which recently came to my notice in the practice of Dr. G. L. Day, Lone Tree, Iowa. Mrs. W., aged 27, married. Soon after the birth of her child two years ago, a nodular ulcerating growth was noted by the attending physician in the upper part of the rectum. During the last year hemorrhagic ascites prevailed, and in three different tappings sixteen liters of fluid were removed. Death occurred Nov. 21, 1899. Autopsy revealed a most extensive carcinomatosis of the peritoneal cavity, to which the metastasis was confined; the abdominal structures were all adhered and matted together into one dense mass, the infiltrated omentum having a thickness of two inches. The primary growth in the rectal wall and metastatic manifestations presented the typical macroscopic and microscopic appearance of adenocarcinoma with accompanying myxomatous degeneration.

In the list of examples of early carcinoma noted, the ages 23,26,27,28,30,32,34 and 35 years are represented. Four of the growths had their origin from surface epithelioma and five from glandular epithelial cells.

Of the cases recorded in literature, intestinal carcinomata have been most frequently observed, but involvement of other tissues common to cancer has been reported by trustworthy observers. Since the publication of Mathieu's classic article, in 1884, it has been more generally admitted than before that cancer of the stomach can occur before the age of 35, once regarded as the earliest possible period. Mathieu[2] himself reported, in 1895, a case of cancer of the stomach in a man 25 years of age. Dock[3] has reported two cases of the same affection occurring at 20 and 24 years of age. In a review of carcinoma developing from dermoid cysts of the ovarian region, J. G. Clark[4] cites three cases at 21, 26 and 29 years respectively. A most remarkable series of precocious cancer is reported by de la Camp,[5] including 4 cases of a carcinoma ovarii in a girl of 19 years, carcinoma ventriculi in a boy of 14, and 1 of 16 years of age, also a case of carcinoma of the colon in a boy of 16. This author at the same time made a careful search of the literature on the subject, collecting 9963 cases, and of these 19 occurred before 20 years of age. W. Roger Williams[15] collected the record of 11,934 cases, and found 0.99 per cent occurring before 30 years, and 2.36 per cent. before 35 years of age. Cumston[6] recently reported 3 cases at 19, 24 and 28 years, occurring in the liver, uterus and ascending colon. A Trayer (*Correspondenz Blatt für Schweizer Aerzte*, Oct. 15, 1899) reported the rare occurrence of carcinoma of the kidney in a man 20 years of age. Many cases are published in so casual a way that enumeration and analysis are out of the question.

Carcinoma in early life often has a slow course, and like that of later years may be latent for a considerable length of time. That cancer in early life is becoming more frequent is very evident; whether it keeps pace with the general increase in carcinoma will be difficult to determine. Certainly a collective study of the statistics reveals the unfortunate fact that the mortality rate of carcinoma is on the increase. Roswell Park[7] calls attention to the statistics of New York State, showing 2363 deaths in 1887 against 4456 in 1898. In England and Wales, where careful records are kept, the rate of occurrence of cancer has increased from 1 in 5646 population in 1840 to 1 in 1306 in the year 1896, an increase of five times in fifty years. This increase can hardly be ascribed as due to improvements in methods of diagnosis, for rather the reverse is the case, since many cases which were formerly diagnosed as cancer are now properly classified where they belong in other lists.

While the etiology of cancer remains obscure, there is but little hope that the future will offer any abatement in this progressive increase. As careful observation continues to note the occurrence of carcinoma in the earlier decades of life, there is removed from the list of predisposing causes, the influence of age.

It has been an attractive explanation to attribute to the lessened physiologic resistance in connective tissue the rôle of permitting atypical proliferation of epithelium beyond its normal limits. With advancing age the submucous, subcutaneous and interstitial connective tissues undergo atrophic changes, while the covering or lining epithelial elements seem to retain their usual vitality. When glands reach the limit of their functional rôle in the organism, the danger from carcinoma is most marked, while it diminishes again when complete atrophy has taken place. When cancer occurs thus in the developing decades of life, the above influences can hardly be considered.

Bearing on the subject of etiology I must refer again to the peculiar secondary, recurrent growth, noted in Case 1. The removal of the primary growth, with uterus and appendages, was technically as perfect as it could possibly be in any case. There was not the slightest involvement of the peritoneal cavity, and yet, shortly after the operation, there appeared in the abdominal suture wound a secondary tumor, identical in structure with the primary one. The nature of the constituent elements left no doubt as to its metastatic nature, yet if a similar instance were to occur in connection with any of the infections how readily it would be explained. While I do not pretend to advance this as any direct evidence of a parasitic cause or spread of living virus, it does seem to me to mean more than the simple transmission of active epithelial cells from primary to secondary site.

In the entire field of pathology, no subject has proven more alluring to physician and investigator than the etiology of carcinoma. It was no wonder that the development of bacteriologic methods gave a mighty impetus to the search for an etiologic agent, the result of which is well known. Numerous forms of cell inclusions—cancer bodies—have been observed **and** variously interpreted. Renewed and repeated attempts have been made to find the curative agent among the protozoa which are to enter the cells and render the same infective. Such workers as Hansemann, Rippert and Schwarz have continued to oppose any such adoption, and it would seem as if that most careful and critical work of Pianese[8] has about taken the bottom out of the theory. By the use of unique staining methods and very careful technique this painstaking Italian has demonstrated, in proliferating cells, both inflammatory and neoplastic, changes and bodies which appear identical with the various forms of cell-inclusions of other observers, but which are demonstrated to be naught but evidences of different forms of cell degeneration.

An interesting contribution is that of Leyden and Schandinn,[9] who have found in the ascitic fluid of malignant neoplasms—carcinoma—a new ameba-like body of the family of rhizopoda, which appear as round bodies in the fluid, having clear and yellow granules, with ameboid movement, and pseudopods of unusual length, life and mobility being retained four to five hours after removal on to the slide. The authors do not advance any definite etiologic connection with carcinoma, yet regard their appearance as quite significant.

Italian pathologists, led by Sanfelice[10] and Roncali,[11] are still champions of the infectious theory, and their recent publications deal exclusively with certain organisms which they place among the blastomycetes, a familiar example of which is the ordinary yeast plant. They regard the organism which they have isolated from tumors in man, and successfully inoculated into animals, as largely identical with the various bodies long observed and variously interpreted as protozoa, cell inclusions, and later as cell degeneration products. Roswell Park finds the work of the Italian pathologists creditable and convincing, and it is to be expected that the New York State Laboratory, in Buffalo, whose special mission is the investigation of tumors, will soon issue some exhaustive work on the subject. If blastomycetes occur in cancers in Italy, they can probably also be demonstrated elsewhere.

As yet it is evident that the real cause of carcinoma has not been demonstrated. Perhaps it will be necessary to completely modify our culture methods. Perhaps our optical aids are inadequate in magnifying power, but unless the light comes soon, the nineteenth century will close with the genesis of cancer as much a mystery as when the century began.

Carcinoma continues to be a strictly surgical disease, and in this light I have thought it in place to refer to some of the earlier methods applicable in intra-vitam diagnosis, with special reference to the following: 1, characters of cancerous effusions in serous cavities; 2, necessity of an early microscopic examination of tumor particles, and 3, the proper interpretation of the histologic picture.

The early appearance of ascites and effusions in serous cavities involved by carcinoma, renders the fluid a good object for examination. The first scientific contribution on the subject was offered by Rieder,[12] who called especial attention to the cells found in effusions, to which subject Dock[13] has also added a most interesting article. I have endeavored to carefully examine all effusions from carcinoma cases it has been my privilege to see, and while my material has been somewhat limited, I have noted the various cell forms described by former observers, and have drawn from these studies the following points:

The specific gravity of cancerous effusions is rarely above 1015, and in that way is distinguishable from tuberculous exudates in which the specific gravity is usually higher, ranging from 1022 to 1025. Since exceptional instances of a lower specific gravity in tubercular pleurisy have been reported, this differential test must be used with a certain caution in diagnosis. The cells are by far the most characteristic feature about the effusion, the most perfect description of these having been furnished by Rieder. Cells having the appearance of lymphocytes are rare; multinuclear leucocytes are uncommon. Cells containing numerous fatty granules are frequent, the accumulation of granular material being confined principally to certain areas in the cells. Giant cells or aggregations of cells are a special feature, some of the former containing twenty to twenty-four nuclei. The most remarkable feature of the sediment is presented by the great number of karyokinetic figures, which are very numerous, presenting as common forms the equatorial plate and anaphase stages; another very characteristic point noted is the presence of atypical mitosis in the larger cells.

Atypical mitosis is an interesting study and has been demonstrated in all active proliferating pathologic processes, but with especial import in carcinoma.

In ordinary serous effusions, as in serous pleurisy and tubercular peritonitis, the large majority of cells are multinuclear leucocytes; furthemore, there are noted numerous small cells having the characters of lymphocytes, a few large mononuclear cells and some fibroblasts. The large cells with mitosis and atypical mitosis seen in cancerous effusions do not, as a rule, have their counterpart in ordinary exudates, which statement bears a slight modification, owing to the reported finding by Dock,[13] in the exudate of pleurisy, of large cells showing karyokinesis.

As a diagnostic guide, it is necessary to state that the number of cells showing mitosis and asymmetric mitosis in cancerous effusions is much greater than in those of simple or tuberculous inflammation, and by this quantitative distinction, it would be possible to make a differential diagnosis.

The large cells that have been referred to are principally of the type of endothelial ones, resembling cells seen in scrapings from serous surfaces, with the exception that the latter do not show cell-division-figures.

One can hardly hope to determine the exact histologic character of a growth occurring on a membrane, from isolated cells found in the serous effusions. If it were possible to demonstrate the Leydenia gemmipara, described by Leyden and Schandinn in cancerous ascitic fluids, an additional aid in diagnosis would be furnished.

### MICROSCOPIC EXAMINATION OF TUMOR ELEMENTS.

The value and import of a knowledge of the nature of a growth, previous to surgical interference, must be apparent to every one, especially since it is becoming manifest that carcinoma may occur at almost any age. Portions of tumors can usually be obtained in a large number of cases. Surface carcinomata, both cutaneous and mucous, are accessible. Uterine scrapings are a great aid. Particles may be observed in stomach washings and in the stools and urine.

While the clinical signs in many instances may be very plain, a microscopic corroboration is always desirable. Frequently the specimens examined in this work represent superficial sections, so that certain caution is necessary in correctly interpreting the histologic picture.

Herzog[14] has called attention to a case in which three pieces were removed from a tumor of the larynx, all of which were called fibroma, while the extirpation of half the larynx revealed the typical picture of carcinoma. The uneven white elevation seen in the larynx in carcinoma may be merely a deposit and infiltration of fibrin.

In examaing uterine scrapings I have noted that while a superficial piece might reveal simply a sort of adenomatous hyperplasia, a deeper section furnished the diagnosis of carcinoma. This would apply whenever adenocarcinoma would be likely to develop, and for the differentiation, histologically, of simple adenoma and adenocarcinoma, I would suggest that the following points be noted: 1, presence of atypical adenomatous glands; 2, absorption of stroma and agglutination of the glands in loops of the same gland; 3, the proliferation of the lining epithelium of glands; 4, filling of gland spaces, rupture of lumen of gland, and proliferation of epithelial cells into the surrounding stroma.

As illustrating a mistake that may be made in connection with ulcerating processes, I would cite a case recently referred to Dr. C. M. Robertson's clinic—a man, 34 years of age, presenting a large ulcer in the region of the soft palate, of six weeks' duration. Naturally the first thought of the clinician was of its being syphilis, but infection being so strongly denied by the patient, and no signs of primary or secondary lesions being detectable, it was set aside for the time being. Examination for tubercle bacilli was negative, tuberculosis of the respiratory tract was not to be detected, and so epithelioma was determined upon, especially as the edges of the ulcer showed a marked proliferation. A small piece, one-eighth of an inch square, was removed from the proliferating edge and subjected to microscopic examination. Section revealed a downgrowth of epithelium from the surface, and two areas of epithelial cells away and separate from the surface, from which it was essential to say that the picture indicated epithelioma.

In the meantime an antisyphilitic treatment had been instituted and the ulcer began to heal rapidly, thus plainly indicating the mistake—one that, in fact, is often made in superficial examination of proliferating epithelial processes, where the direction in which a section is cut may give misleading microscopic pictures resembling epithelial proliferations into the deeper tissues, and emphasizing most strongly the obtaining of deeper sections from representative portions of the growth for diagnostic purposes.

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Contagion of Herpes Tonsurans.—Several cases of herpes tonsurans were traced to the barber shop and through one customer to his dog, which had become infected by a monkey in the same house. Berger, who reports the occurrence in the *Derm. Cbl.* for April, arrested the epidemic by prompt destruction of the infected articles in the barber shop. He suggests that stricter hygienic measures be exacted of barbers, who should raise their prices to correspond, and he also warns against the fondling of household pets.

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# EXPERIMENTS AND OBSERVATIONS IN SCARLET FEVER.*

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Since Chicago has achieved the distinction of being a great city, scarlet fever, in forms more or less severe, has been present. During the summer and autumn of 1897, Dr. I. N. Abt found it prevalent in a light form among the poorer classes of Poles and Bohemians in certain parts of the city. The cases were so light that physicians were seldom called, and no intelligent action was taken to restrict contagion. An epidemic resulted. The health department, while realizing the danger, was crowded by more serious matters, and the afflicted communities enjoyed the blessing of becoming immunized while the disease was in its mildest form. From these localities the fever has gradually spread until it has included the entire city.

In the autumn of 1898, when the reported cases of scarlet fever were greatly increased, Dr. Wynkoop of the city laboratory, while examining a culture from a scarlet fever patient, sent him by Dr. Findley, noticed a coccus which he first took to be a form of the pus coccus. But on growing, it manifested such peculiar characteristics that he began to pursue a careful study of the germ in the laboratory. At a certain stage of its development it became a large coccus, the center of which stained in the shape of a double crescent. While this germ was still under observation by Dr. Wynkoop, Dr. Class described his diplococcus scarlatinæ, in a paper before the Chicago Medical Society. While Dr. Wynkoop used the term "crescent" and Dr. Class "diplococcus," I concluded, after a study of many cultures from scarlet fever cases, that both were different forms of the same germ. This attempt to name an organism from some particular stage of its development was responsible for the uncertainty concerning it.

This germ has a wide morphology. Sometimes one stage and then another will become accentuated, according to environment and nutrition. Sometimes conditions are favorable to its growth in chains and the culture will show the streptococcus form. In another case it will grow as a staphylococcus, and in still another as a diplococcus. Again it becomes oblong and almost a bacillus. Early bacteriologists attempted to classify micro-organisms according to shape and arrangement, and they were divided into families of streptococci, staphylococci and bacilli, etc., but in this case we have a germ that may be either or all.

Bacteriology is still too young for us to be bound too strongly by precedent. Professor Koch formulated what he considered the law to which the causative germ of a disease should conform. While this law is applicable to some diseases, many more do not fulfill all the requirements, yet experience is demonstrating that germs are the essential causes of disease in those which do not conform as well as in those which do.

As above stated, the morphology of this germ, which I have been finding in scarlet fever, is one of its most interesting features. The size of the coccus depends on its environment and the medium on which it grows. In the same culture, it will sometimes vary from the smallest point observable under a one-twelfth oil-emersion to a coccus one-third the diameter of a red corpuscle. It appears that these cocci multiply by division, and that the multiplication takes place in various sizes of the germs. When inoculated on a culture-medium. they usually grow to the favorable dividing point and then divide rapidly so that an examination shows a field of nearly uniform size. If the culture is permitted to develop, the older germs attain a large size and show the crescent form on staining. In a culture of the germ inoculated on the Löffler serum, and incubated five to ten hours, there will be an abundant growth of large cocci sometimes arranged as staphylococci. In the same culture there are sometimes found short chains of six to twelve. This is the usual form of growth, but either the staphylococci or streptococci arrangement may predominate. This coccus when stained appears to have a small hole in it. As it enlarges, this hole is seen to be a dividing line of material which does not take the stain. This gives the coccus the appearance of a pair of crescents with their points turned toward each other. This is the last and largest stage of growth. At times the germ much resembles the staphylococcus albus, having a clean, definite cell wall. Frequently there seems to be a gluelike exudate covering the surface of the cocci. When a colony is touched with a platinum needle, this exudate can be drawn out in strings and seems to modify the surrounding medium so that it will take the stain to a greater or less degree. Sometimes the germs of the culture pass into a stage in which the germ wall seems to almost lose its definite structure, and the germ appears a refractive jelly-like mass.

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*Read before the Society of Internal Medicine, Chicago, Feb. 27, 1900

I have examined from six hundred to a thousand cultures from inflamed throats each year for the past six years. During the winter of 1898 this coccus began to appear; at first only in cultures from scarlet fever patients and those who had come in contact with the disease. During the following year its frequency increased, keeping pace with the increase of scarlet fever. The infection has now become so general that fully 80 per cent. of the cultures that come to my laboratory contain this coccus.

As abundant clinical observations have proven that the contagion of scarlet fever lies in the scales, I began a careful examination of these. In twenty cases, from which I collected scales, abundant growths of this germ were obtained. Drs. Gehrmann, Wynkoop and myself conducted the following experiment: An emulsion was made from scales taken from a patient recovering from scarlet fever. A twelve weeks' old hog was injected with 10 c.c. of this. An emulsion was also made from scales given to us by Dr. Class and another hog inoculated. The animals showed but little effects from the inoculations. They were larger than we could handle well, but were the best we could secure. It required the combined efforts of two to take the temperature and, after taking it the second day, it was not taken again. The animals were watched daily, but as there was no loss of appetite or other evidence of their being affected, we concluded to try a larger injection. When we examined the animals preparatory to making another injection, twenty-one days after the first, we found they were both scaling profusely. Cultures from the scales revealed the presence of the inoculated germ.

A third animal was obtained and placed with the other two. A rise of temperature followed lasting several days, when this animal also scaled off. A piece of its skin was taken and the germ found in the blood. The children of adjoining apartment houses showed a disposition to use the barn as a play-house and it was not considered safe to continue the experiments. The isolation necessary, the difficulty in obtaining suitable animals on which to experiment, and the limited amount of time we were able to devote to observations made the results less accurate than we could wish, but they are of some value in indicating lines for future investigation. The chief difficulty in the way of acquiring definite knowledge of the scarlet fever germ is the great care necessary to conduct experiments, as well as the best laboratory facilities and, more important than all, subjects for experiment.

Clinical observation has established the fact that scarlet fever begins with inflamed fauces followed by general constitutional disturbance and characteristic rash; that these symptoms are followed by scaling of the epidermis and that in these scales lies the element of contagion.

Having found the germ present in the initial lesion, and in the scales, it was most important that the connecting link should be found in the blood. I began to examine blood by sterilizing the earlobe with alcohol and then puncturing it. In the first two cases I found the germ present by spreading this blood over the surface of a blood-serum culture-box, such as is used in the health department. Then instead of spreading the blood over the surface, I allowed it to remain as a drop on the surface and incubated the box. Several failures followed, which I attributed to the antitoxic qualities of the blood, or the fact that the germs were not present in the blood when it was taken. In one case, when the rash was just appearing, I collected blood on a sterilized swab, which was dropped into beef bouillon. In two out of three of these cases the germ was found. The taking of blood from the ear not being above criticism, on account of contamination from the skin, I determined to obtain it from venous puncture. This was done in two cases and the germ found in both. But the securing of blood in this manner is painful and not easy in private practice.

In considering the evidence as to whether or not this germ is the essential cause of scarlet fever, we should first study it under laboratory conditions and thus ascertain whether it gives evidence that it is capable of multiplying in the human body. We should then trace the germ through the body and observe its effects on the different tissues.

If the germ has shown itself very sensitive to environment in the laboratory, we should expect this also in the tissues in which it multiplies. If there is a varying degree of susceptibility in the human family, this fact must be taken into account in the study of the disease. If the germ possessed a definite virulence and always affected the human body in the same manner, its study would be a comparatively simple matter; but in scarlet fever we have a germ which is variable in its virulence, and to which there is the widest degree of susceptibility in the human family. Not only are but few individuals susceptible, but even these vary in susceptibility. The various tissues afford a different environment and present different conditions for the multiplication of the germ; also varying degrees in their resisting power, as well as different conditions for the destruction of the germ.

In tracing this infection through the body, we shall begin with the usual site of the invasion, i. e., the mouth. The human mouth, being the entrance to the respiratory passage, is continually fanned by large quantities of air. The mucus which covers the throat is a more or less nutrient medium. The glands and adenoid tissues around the air-passages are of a more or less low grade of vitality. The mucous membrane which lines this cavity is a tissue subject to inflammation. Large numbers of germs inhabit the healthy mouth; many of these become pathogenic when conditions permit. They remain as harmless saprophytes until conditions of susceptibility, such as congestion from cold, deficient renal elimination or other means of lowering the vitality in the surrounding tissues, producing the results which their cycle of activity brings about. In my studies I have found that the angina produced by the scarlet fever coccus in no way differs, except in degree, from the anginas which accompany the disease. The angina produced by scarlet fever infection, however, possesses certain characteristics that do not follow the usual invasion of the pus cocci. There is an intense redness of the tissues; the throat is very sore; and there is a tendency to the involvement of the glands, and it is nearly always accompanied by high fever.

These symptoms do not end in from thirty-six to forty-eight hours, as in ordinary tonsillitis. They do not terminate in the formation of pus; but the inflammation, as before stated, has exactly the same course as that which accompanies scarlet fever. Should the invasion multiply to the extent of producing scarlet fever, there is nothing about the throat but what would be in perfect harmony with the usual angina which accompanies this disease.

When this infection invades the trachea sufficiently to produce stenosis, I have found, in the six cases that have come under my observation, that a prognosis must be given which essentially differs from that of an invasion produced by any other germs causing this condition.

In the invasion of the Klebs-Lőffler bacilli, under the magical effects of antitoxin, the tube may be removed in three or four days in the majority of cases. The staphylococcus also has a short period in which the tube must remain. The streptococcus causes a more lasting inflammation, requiring the tube to be worn from six to eight days.

Stenosis of the larynx or trachea from scarlet fever causes the longer wearing of the tube than in any other infection. If the tube is removed in six, eight or ten days, the trachea seems to collapse and stenosis remains, which appears to be more from the relaxed condition of the trachea than from swollen tissues.

In each of the six patients I have intubated this winter, for scarlet fever stenosis, the tube was removed and again replaced from three to twelve times. As I have become more familiar with the nature of this infection, I allow the tube to remain for a longer period of time. Two of these intubations were in patients in whom there were well-marked manifestations of scarlet fever. The other four were in children from whom cultures showed a malignant growth of the scarlet fever coccus, but they did not have the disease; yet the same clinical symptoms followed in the trachea that appeared in the scarlet fever patients.

We have seen that we can have an extensive multiplication of this germ in the mouth, in the mucous membrane of the throat, extending into the glands of the neck and trachea, and yet not have scarlet fever. However, should the germs be enabled to pass into the blood and there find a condition for their multiplication, what symptoms would probably follow? Here it is necessary to study the conditions of environment which this tissue, the blood, presents for the multiplication of the germ. The blood is a highly nutrient medium, always at the same temperature, and may be said to represent the composite product of all the cells of the body. In addition to this, it contains the nutrient material for their support. Were this all it contained, we could readily understand that it would be a fluid which would be a most suitable medium in which pathogenic germs could multiply. For the defense of the body there are cells which circulate in the blood, one of whose functions is to destroy hostile germs. This, then, in addition to the antitoxic qualities of the blood, constitutes the defense which the body has against the invasion of pathogenic germs. The rapid circulation of the blood brings it into constant communication with every cell in the body, and in this manner they are almost instantly made aware of any addition to it. Should pathogenic germs begin an invasion in or on the surface of any of the tissues, the product of their life is at once taken into the blood current. It notifies all cells throughout the body of the invasion of a hostile enemy, and they are at once stimulated to the production of antigermin, or a defensive antitoxin.

We can thus understand that the blood is most highly antagonistic to germ invasion. At the same time, when germs invade it, their distribution to all parts of the body is but a matter of seconds. Therefore, following the enormous multiplication of the scarlet fever germ in the fauces, numbers of them enter the blood current. If this medium is sufficiently resistant, they are destroyed before any great amount of multiplication takes place. If this is not the case they multiply and are distributed to all parts of the body, and owing to the nature of the exudate which covers them, they would be likely to collect and cling in the capillaries of the tissues. They would carry with them the same irritating effects which we notice in the multiplication in the pharynx, and this would continue as long as they possessed life.

Therefore, the phenomenon which would follow the invasion of this germ in the blood would be entirely in harmony with the rash which characterizes scarlet fever. The condition of the blood in children, where the demand on it is so great for the rapidly growing tissues, and where the mucous membrane of the throat is so tender and easily invaded, indicates why they should be more susceptible than the more stable tissues of the adult.

The resemblance of this germ to the staphylococcus albus when growing under laboratory conditions, suggests the query as to whether or not it *is* the staphylococcus albus itself which, under a different environment, has adapted itself to the invasion of the blood and thus causes scarlet fever.

Evolution is much more rapid in germ life than in the higher forms, because their cycle of activity is so short. Change of environment may produce change in form and function. This we see illustrated in almost all of the pathogenic germs. The effect of residence in the human tissue may cause it to assume increased virulence and malignancy. For example: puerperal infection containing the ordinary forms of streptococci or staphylococci becomes most dangerous when carried from patient to patient. The study of these germs in the laboratory can give but a meager idea of their possibilities when growing in susceptible human soil. This may also be true of the staphylococcus albus.

The residence of germs in the human body causes them to take on qualities which can not be demonstrated by ordinary laboratory methods. In the laboratory we see, growing on moist filter paper, a fungus which, under these conditions, grows in the branching form of the fungus family and seems to be an innocent mold. Yet this same fungus was and is the bacillus tuberculosis originally taken from a patient suffering from this disease. By change of environment the bacillus was brought back to its original form of a branching fungus.[1]

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[1] *See Hueppe's Principles of Bacteriology.*

The great variability in the poisonous qualities of the bacillus anthrax, caused by changing environment, may also be cited as one, and the fact that the cholera bacillus does not become malignant until it multiplies in the presence of decomposing filth is still another illustration of what environment will do.

Therefore, the study of the diplococcus scarlatinæ in the laboratory alone can give but a partial idea of its possibilities when introduced into the environment of the human body. Judging from the wide range in the morphology and adaptability of this germ, it does not seem impossible that it was originally the staphylococcus albus and has been modified by its human environment.

In the study of scarlet fever it is most important to appreciate the value of susceptibility in the production of the disease. I think we are justified in calling the blood the essential tissue in which the multiplication of the germ takes place to produce scarlet fever. When we consider that this fluid represents the cell production of the entire body, we can appreciate how it must vary in its resistance to germ invasion, not only from day to day but from hour to hour. Exhaustion, loss of sleep, lack of food, vitiated air or any debilitating cause which modifies the nutrient medium of the blood will affect its resistance.

After the cells throughout the body have been stimulated to the production of a resisting quality, they maintain a continued immunity. Nurses who have had scarlet fever may contract sore throats from virulent cases. Families where all the members have had the disease may also have severe anginas caused by this same germ.

The finding of this scarlet fever coccus in cultures from the throat has a different meaning from that of the Klebs-Löffler bacillus, because it is a different germ, multiplies in a different tissue and is carried in a different manner. In the case of the residence of the germ in healthy mucus, no disturbance of functions follows. When the tissues of the pharynx are invaded, similar phenomena result as in other germ invasions, but this germ in its minute form possesses the power to pass through the barrier of mucous membrane into the blood, where it multiplies, if this medium is in proper condition. The stay of the germ in the blood in patients who recover is very short, because every effort is put forth to destroy the invaders. Leucocytes are poured into the blood current and every cell is stimulated to produce antigermin. Then follows the more gradual process of absorbing the inflamed areas which may still contain the germs. While they are thus rapidly destroyed in all the internal tissues which are accessible to the blood, the skin, which is in a continual state of exfoliation, still contains the germs. During the rash period, the external layers of the skin are filled with germs; their irritative effects cut off nutrition and, as a result, those epidermis scales which are not reached by the blood during the process of recovery are filled with the minute germs. These are carried to other susceptible persons by various means, and the process repeated.

A harmless method of producing immunity by the stimulation of the cells in children exposed to scarlet fever would lessen the fear and the fatal effects of that disease as it has done in diphtheria. As soon as we have sufficient knowledge of the germ and the conditions under which it grows, this will be accomplished. Immunity against scarlet fever is enjoyed by more than 99 per cent. of individuals. Those who have suffered from the disease seldom or never have it again. Thus we see that immunity is the rule and susceptibility the exception.

In the production of immunity against disease the germ is the most important factor. In the malarial districts of the South, the negroes become immune by continually being in the presence of malaria. In this manner, or by non-fatal attacks, immunity in cholera, typhoid fever and diphtheria is produced. That immunity is conferred by an attack of the disease is already known. From the wide distribution of the germ at present, nearly all susceptible individuals must contract the disease and become immunized. In the production of artificial immunity, the problem is to bring about the cell stimulation in such a manner as not to endanger the life of the patient. In individuals who are slightly susceptible, a residence of the germ as a saprophyte probably accomplishes this, while a sore throat is necessary in those whose tissues of the throat are susceptible; and scarlet fever follows in those who are still more susceptible. In the present epidemic, those who have had an angina in which the scarlet fever germ predominated, have not had scarlet fever.

In the attempt to produce artificial immunity the nature of the germ should be kept in mind. In my laboratory experience, and from clinical observation, I should say that it is an irritating, fever-producing germ and not a toxic or toxin-producing one, the pathologic conditions being caused by the multiplication of the germs themselves and their irritating presence rather than from any toxin which they produce. In this it differs from the Klebs-Löffler bacillus, which is a toxin-producing germ and not a fever or irritating one. In this respect the scarlet fever germ resembles the typhoid bacillus. Bacteriologists say that the difficulty in getting an antitoxin for typhoid fever is because they are unable to obtain a toxin of sufficient strength to stimulate the cells of the animal to produce an antitoxin. This same difficulty will stand in the way of producing an immunizing serum for scarlet fever.

However, another way of causing protection suggests itself to me. In scarlet fever, the site of the invasion usually includes the entire mucous membrane of the pharynx, and from this extensive surface the germs are enabled to enter the blood in overwhelming numbers. Surgeons have often noticed that wounds in other members of a family, where there is a case of scarlet fever, become inflamed and are often slow to heal, but the disease does not follow. On the other hand, the introduction of scarlet fever germs into the vagina of a recently delivered woman is extremely fatal. Therefore, the ease with which the infection enters the blood is a most important factor. In wounds there is a barrier of swollen capillaries gorged with leucocytes which stand between the germs and the blood. In a puerperal case, and also in the throat, there is an open door almost directly into the blood.

Being aware that experiments in inoculation have been disastrous, I had to be careful in this work. My first experience was the inoculating of the puncture after giving diphtheria antitoxin. A little girl was scaling from scarlet fever when her mother contracted diphtheria. The circumstances of the family were such that isolation of the younger brother could no longer be maintained, and I immunized the two children. With the consent of the father I inoculated the site of the puncture in the boy with scales from the sister. A slight rash followed, beginning at the site of the puncture and spreading over the body. The scaling was very much less than in the sister.

The child of a physician became slightly burned. The father had attended scarlet fever patients during the winter. The wound became inflamed and a rash followed with a rise of temperature to 101 F. No throat symptoms were present in either this or the previous patient. I think it rather hazardous to inoculate the germ directly into the blood current, and it seemed to me that the infection in the case of the burn was the mildest.

It is my purpose to experiment with the following method whenever an opportunity presents itself: Raise a small bleb by means of a fly-blister; with a hypodermic needle inoculate the serum without breaking the blister, if possible. If the patient is susceptible, the germs ought to multiply in this serum, and before passing into the blood, they would have to get through the barrier of inflamed capillaries filled with leucocytes. In this manner their entrance would be slow and the blood could gradually take up the products of germ multiplication in the serum, while the cells would be stimulated to the production of a defensive antigermin.

I have purposely avoided the conflicting literature on scarlet fever. Two things are necessary in a contagious disease, i. e., the germ and a susceptible person. From my standpoint it is impossible to produce the disease under laboratory conditions, as the multiplication of the infection requires not only a living blood environment but this must have, in addition, a peculiar quality which permits the production of the disease. Therefore, the bacteriologist in his laboratory can get at but a small portion of the evidence. A chain is only as strong as its weakest link, and the links of evidence in this chain must not be separated. The microscope must be taken to the living environment and the germ studied under the conditions in which the disease is produced.

No doubt further study and experiment may cause me to change some of these views, but at the present time they are the most reasonable explanations of the clinical phenomena in scarlet fever. If the criticism they provoke prove them false, the discussion may lead to the truth and compensate for the preparation of this paper.

4316 Greenwood Ave.

### DISCUSSION.

**Dr. Adolph Gehrmann** said that he does not believe, from the examinations, that he has been able to make out that this coccus, from its microscopic appearance, is sufficiently characteristic to say that it is always the Class coccus. His observations have shown that a bacterium, giving the same appearance, and in a great many cases more cultural characteristics, has been found in other conditions, especially on the skin of individuals who have not been in contact with scarlet fever patients, and in some rather unusual places. For instance, he has found a coccus giving the general characteristics of the Class coccus, in vaccin material a number of times. He has found it in samples of urine and in other specimens in conducting general examinations. Dr. Gehrmann gave his reasons, at considerable length, why he does not think the Class coccus is the only and sole cause of scarlet fever.

**Dr. William J. Class** called the attention of the Society to the published work he had done with reference to the germ of scarlet fever.

**Dr. Ludvig Hektoen** said that it has been held theoretically that scarlet fever is not a toxic disease, but its lesions are those of a toxic one. In the organs of patients dead from scarlet fever, the same necrosis and degenerative changes are found in the lymphatic glands, spleen, bone-marrow, liver, etc., as are found in such diseases as diphtheria, etc., of the toxic nature of which there can be no question. Investigations with reference to the etiology of scarlet fever must go further than a mere investigation of the morphology of a coccus.

**Dr. L. Maywit** narrated two cases of scarlatinal sore throat that he saw in a family. Cultures were made and the Class diplococcus was found. In one case the temperature varied from 103 to 104 F., and in the other from 102 to 103 F., and this elevation of temperature lasted four or five days in each patient. Repeated examinations of the urine were made and albumin was found daily for six or seven days, after which it disappeared. The children had no albuminuria before the onset of the fever, and none after, so he thinks the albumin must have been caused by the scarlet fever germ. The eruption was not marked in either case. Both children recovered.

**Dr. W. K. Jacques**, in closing the discussion, said that he has found the diplococcus of Class present in great numbers in the throat, the blood, and in the scales of scarlet fever patients. Indeed, he has found this germ as frequently in cases of scarlet fever as is the Klebs-Löffler bacillus found in diphtheria.

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## DISTILLED WATER AS FOOD.*

BY EPHRAIM CUTTER, M.D., LL.D.

NEW YORK CITY.

Food is any substance received into the human system from without, which normally becomes a biologic part of the system and is needful to life. It includes minerals, as air, water, salt, etc. Aerated distilled is also meant here, and not the ordinary chemical laboratory distilled water, condensed in a closed reservoir. The distillate should have a fall of not less than two inches in open air for aeration, otherwise it may be an abomination of the meanest taste.

### HOW TO HAVE IT.

Philadelphia is the great medical center, and yet my patients have been unable to buy anything but laboratory-distilled water. So the best way is to make it. The writer tried to get all the domestic water stills in the market to report on, but was unsuccessful. As he is writing this paper interprofessionally and clinically, he asks to testify simply to what he knows and let the still-makers arrange for their own testimonials. While many stills are in the market, they are too expensive for the average person and too complicated. Between the lines their advertisements read as if they were made for making money, not water. The merchants give an idea that distilling water is an exceptional and difficult thing, obtainable only through their wares, each being the best and all others poor, if not worthless.

A few moments of reflection shows that aerated, distilled water is most abundantly present in the open air, as rain, clouds, dew, fog, mist, invisible vapor; also in solid state, as frost, hail and snow. From all surfaces of water—fresh or salt—or of substances wet in water, water is by nature's evaporation distilled. From the ocean distilled water rises in the air, is held in solution, carried by the winds inland to the mountains and hills, where it is condensed by cold into rain, clouds, etc., and is swallowed up by the earth, or falls in the forests, slowly forming springs, pools, fairy rills, brooks and rivers, whence it runs back to the ocean or inland lakes, to be distilled again. This process has gone on so long that all collections of outletless waters become loaded with the salts and other minerals, as would be expected in the residuum of distilled water, simply because salts and minerals are not volatile like water, which rises as steam even at temperatures below zero (F.). (See works on steam.) Thus the ocean and the Dead Sea have become salt. This natural distillation has existed for ages, on a most tremendous scale, and will continue as long as God wills. It is difficult to see how anybody can monopolize water stills, they are so universal.

The principles of distilled water [illegible] rtificial, are: Evaporation and condensation in a reservoir. The former is had by heat, the latter by surrounding the reservoir with cold water or cold air.

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I remember seeing, when a boy, almost a stream of clean, pure, glistening water fall from the under surface of the cover of my mother's wash boiler, when she removed it to gratify my boyish interest in its seething contents. I think a few drops fell on me, and I found out it was hot water. I wondered where it came from, for I saw there was no contact with the boiling suds, and it was clear water. It was a problem to me then, and I think my boy mind must have solved it at that time, as distilled water condensed by the contact of air which, rising as fast as it was heated, was replaced by cooler air, condensing the steam. Every time I saw a wash boiler at work I verified this observation. This principle of making distilled water became a fixed one with me, but it lay dormant and was not utilized for about forty years, when a patient of mine was going to Idaho to teach school and I did not want her to drink the alkali water. I told her to have a common wash boiler soldered all around inside, four inches from the bottom, with a strip of tin one inch wide, at an angle of 45 degrees. At one end of the boiler this ledge was to be left a little lower for drainage. The tinsmith was to put in a one-half-inch tube running outside for four inches, to drain into a receptacle, at least two inches lower for aeration. The other details were so simple that she had sweet water instead of bitter. The principle of this still is clearly manifest: The steam, condensed by cooler air in the boiler walls, ran down in tiny drops to the ledge and thence into the receptacle. In London, 1889, a like still was made for Sir W. A. Mackinnon, the highest medical official of the British army, who approved of the principle and said he wished he could have had one in India. I have published illustrations of this still several times.

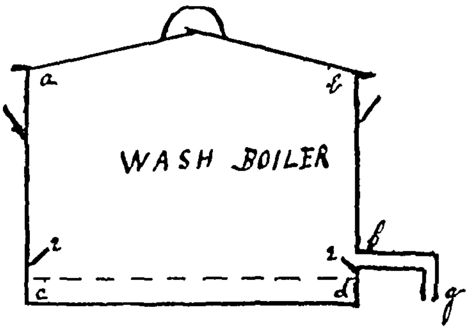


Fig. 1.—Vertical section of wash-boiler still, a, b, c, d; e e, one-inch flange; f, opening; g, tube.

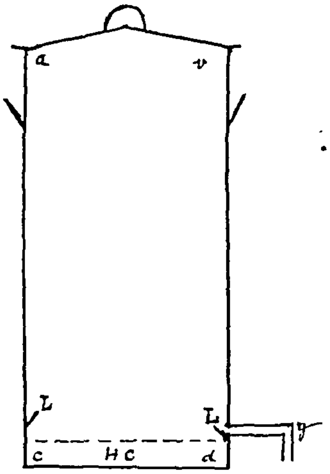


Fig. 2.—Vertical tank still; ab, 12 inches; ac, 28 inches; cL, 4½ inches; LL, 1-inch ledge.

The still made in London *had not surface enough; it* got too hot, so it would not condense.

When Fig. 3 was run on the cover over the fire box of *our kitchen range it condensed 10 ounces an hour or 2* gallons daily, more than enough for one patient; but placed over the cover next the first named, it distilled just the same amount with the advantage of being out of the cook's way. *Increase the height and the product is* increased, and perhaps in a greater proportion, as the higher the still the farther away from the fire. This can be done by adding a bottomless still of the same size and placing the cover on top as before. Fig. 3 was made, with a copper bottom, of common tin, for $4.25, by a plumber.

*Suggested forms of this still.*—Have a closed, clean tin or galvanized-iron stove or furnace pipe 10 to 25 feet long set upright out of doors, close to the house. Have a small air hole at the top, also an exit tube at the closed bottom next to it for delivery and aeration of the distillate to the receptacle. Connect the steam through an opening four inches from the bottom, from a common tea-kettle or other source. Or run the tea-kettle or other steam into a common wash boiler, through an opening in the cover which has a drip tube.

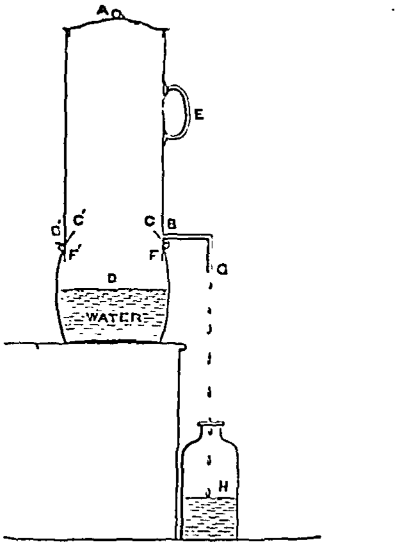


Fig. 3.—Water still as used by E. C. Air the condenser. Height, 2 ft. 6 in. A, handle to cover; E, side handle; C C, 1-inch flange; B G, distillate tube; H, receiver.

*If steam is easily had, it can be run into a rejected water* back-tank—which plumbers are glad to throw away—set vertically outside. These examples are enough to demonstrate the principles of air-condensing water stills which, for their simplicity, cheapness and usefulness should be as free as air, and should be found on shipboard and all places where pure water can not be obtained. *The product from sea water, obtained from* Fig. 2, is palatable, pure and delicious.

The difficulty with rain water is that there are so many forms, organic and inorganic in the air—morphology—that the taste is impaired. If the rain is filtered, as in mountain springs away from man and beast, the result is delicious and curative as patients testify to the curative effects of pure spring water.

### DIETETIC PRINCIPLES OF AERATED DISTILLED WATER.

*Negative.*—It is not a poison or I would have been dead long ago, as I have for years used all the distilled water I could get. Its osmosis is harmless. A German physician, Dr. Koppe, claims that the turning white of the epithelia of the alimentary canal by distilled water shows it to be poisonous. There is some truth as to the color, as seen on washer-women's hands turning white in the suds, from long immersion, but I never knew of one being poisoned. I wonder how our German secured his information. For about twenty-five years I have studied the morphology of hydrant, well and ice waters. Rarely, if ever, have I found epithelia absent. Many are so common and well preserved that their presence has become a matter of fact, taken for granted as daylight. Epithelia have a wonderful vitality soaked in water and have no washer-woman's white color. I wish our learned German friends would see if we are right in saying that probably epithelia loaded with diphtheritic or scarlet fever vegetations in hydrant water may communicate these diseases, also as cholera, smallpox, typhoid fever, etc. My patients have freely used distilled water and none were poisoned, in fact have recovered from so-called incurable diseases. Allowing the dictum aforesaid, Nature reproduces epithelia so rapidly as to meet the need, wet or dry, but this is nominal metabolism.

*Positive.*—Distilled water cleanses the tins that contain or condense it, brightly. This might show that hydric acid =HO= distilled water, is more active than undistilled to dissolve salts and metals—that is to say, having no salts in solution is a great clinical advantage as distilled water will more readily dissolve out granular, crystalline and massive gravels that accumulate: 1, in the blood in rheumatism or gout; 2, in the lungs in asthma, fibroid consumption and chronic bronchitis, colds and coughs; 3, in the kidneys, intestines, liver, vagina, mouth, blood-vessels—arteries; 4, in and on the skin; 5, on the teeth as tartar—in fact all the calculous diseases, no matter what the location.

### ROLE OF CALCULI, INCLUDING ALL GRAVELS.

They are formed normally in the body systemic in the performance of its functions. Normally they are saline bodies held in solution, and are dispensed with after use by the skin, urine, feces. This is said advisedly from many years of observation by others and myself. If from any reason calculi are deposited from their solutions in the blood, urine, feces or the skin—whose sweat, tasting of salt, is one proof of these salts—then the respiratory tract vicariously attempts to eliminate these calculi from the system and so irritates the air-passages and causes coughs and colds—as one of Nature's ways to get rid of the calculi as intruders on the peace of the kingdom of the body systemic.

If the lungs and nares do not succeed in the removal, the over-worked kidneys, intestines and skin take a hand and do the best they can, and yet we call these lung, nephritic, intestinal and dermal efforts—diseases—when they are nothing but Nature's efforts to save the health and life of the body systemic. Now the most common sense thing to do in helping Nature to cure these so-called diseases is to wash out the calculi with water, God's great gift to man. It stands to reason that distilled water, having no saline bodies in solution, will dissolve out more gravel than ordinary well or hydrant waters, even if filtered.

A few years ago, Dr. R. H. Sayre, of New York City, returned from Paris saying the French told him this doctrine, and he informed them he had heard it in America.

### SOME PRACTICAL EVIDENCE.

A few years ago a veteran captain, War of 1861, had the signs of fatty degeneration of the kidneys, voiding calculi. The Geneva Spring water was his drink. A large uric acid calculus brought him $5.00 from the water company and was referred to in advertisements as positive evidence of the marvelous removal of stone by this water. But the man grew worse and went to Dr. J. A. Cutter's hands, who, finding there were some 232 grains of solids to the gallon of the Geneva water, correctly inferred that the water kept the calculi forming in a system which before was saturated with salts. Captain C. was put on distilled water for drink and chopped meat diet. His health was restored and now no calculi are voided. I deem distilled water far better than lithia waters, on the ground of cures and the uselessness of adding more salts when the system is so saturated as to deposit granular, crystalline and massive gravels or calculi inside the viscera and tissues.

### CASE TO SHOW THE DIFFERENCE BETWEEN COCHITUATE WATER AND DISTILLED OR SPRING WATER WITH LESS THAN TEN GRAINS TO THE GALLON.

Professor M., of Boston, an old patient of 1876, in the pretubercular state, about 1894 had a severe and harassing cough which, under the circumstances, caused apprehensions of the return of tuberculosis. But the morphology of the blood was not tuberculous nor pretuberculous. The sputum showed gravel—granular, free and encysted—in giant mucous corpuscles distended by the gravel, also crystalline and massive—i. e., like broken glass—and pigment matters. He was, as to drink, treated with spring—as above—and distilled water. Fourteen days later the gravel had mostly disappeared from the sputum and with it the cough.

These opinions are based on a study of the morphology of hydrant and well waters for twenty-five years. My conclusions are that water by itself or inhaled in the air passively and constantly is a food, indispensable to all mankind; that, if so, why feed "calculi" patients on waters which add to the already overloaded collections? that distilled water properly aerated is the best for such rheumatics and asthmatics; that if Germans have been poisoned by distilled water, it is a very remarkable idiosyncrasy in those who have figuratively more vitality, more strength and actually enjoy more rights than Americans; German patent medicines are used by American physicians largely, beneficially, undisturbedly, while cis-Atlantic patent medicines and appliances can not be employed by American physicians; that water is a solvent in biology; that the purer it is, the better will water wash out the viscera, dissolve calculi, ease the flow of blood through the more than 100,000 miles of capillaries in the system, promote osmosis, soften tissues, accelerate secretions and excretions, equalize all circulations, aid cerebration, cardiation, digestion, metabolism; that distilled water is free from bacteria, yeasts, epithelia loaded or not with cryptogamic diseases; that whatever gets in from the morphology of the air of the kitchen can not be so deleterious as some aver, because the culinary queens inhale it all the time, harmlessly.

The writer hopes it will become the fashion to "treat" people with distilled in place of undistilled water and spiritous liquors, as he found it appetizing, satisfying, going to the right spot, clean tasting and beautiful to the eye as well as the palate, wholesome and never intoxicating (toxa=poison) as our experience proves with the Americans and English, though Dr. Koppe asserts it has. I respect him but do not accept what he says, as it does not tally with the facts here given.

# CHRONIC CONSTIPATION A SYMPTOM RESULTING FROM A DISORDERED STATE OF THE SYMPATHETIC NERVOUS SYSTEM. ITS CAUSES AND CURE.

BY CHARLES E. STEWART, M.D.
BATTLE CREEK, MICH.

Chronic constipation, although commonly considered a disease *per se,* is in reality only a symptom indicating the presence of some more general disorder. This symptom, if such we may be permitted to term it, is one which accompanies a great many disorders, being most frequently met with in persons having some other digestive disturbance. Whenever encountered, it is an indication of some inhibitory power acting through the motor, vasomotor, secretory, or sensory mechanisms of the alimentary canal. These mechanisms, being involuntary in nature, are under the control of the sympathetic nervous system; consequently the primary cause of the constipation must be sought for in some inhibitory influence acting on any or all of the mechanisms referred to.

A brief survey of the anatomy and physiology of the sympathetic system will make clear the anatomic relationship existing between the cerebrospinal and the sympathetic system, and also their control over the functional activities of the alimentary canal.

The sympathetic system, although not wholly removed from the influence of the cerebrospinal, as will be seen later, has to a certain degree an independent action of its own, by means of which it controls nutrition and visceral rhythm. The sympathetic system consists essentially of: 1, a series of small ganglia located on the posterior roots of the spinal nerves close to their emergence from the cord; 2, a series of ganglia located on either side of the vertebral column, extending from the base of the skull to the coccyx, these being joined together by means of nerve-fibers, at the top by the ganglion of Ribes, and at the bottom by the ganglion impar, thus making a continuous chain of ganglia, commonly known as the gangliated cord, or vertebral ganglia; 3, three large gangliated plexuses located in the thorax, abdomen, and pelvis, known respectively as the aortic, abdominal and pelvic plexuses, or prevertebral ganglia; 4, an innumerable number of smaller ganglia located in relation with the various viscera and blood and lymph vessels, known as the terminal, automatic, or visceral ganglia, and 5, a large number of nerve-fibers. These are of two kinds, communicating and distributory. The former connect the ganglia with each other and with the cerebrospinal nerves; the latter connect the prevertebral ganglia with the automatic ganglia located in the viscera and circulatory system. The spinal nerves are connected with the vertebral ganglia by means of the white rami communicantes, which pass out from the anterior roots of the spinal nerves, some fibers passing to the vertebral, others directly to the prevertebral without communicating with the vertebral ganglia. There are also gray rami, consisting of non-medullated nerve-fibers, passing back from the vertebral ganglia to join the main nerve trunk of the spinal nerve, part of the fibers passing back to the cord as vasomotor fibers to supply the vessels of the cord and its coverings, the remainder passing with the main trunk of the nerve to supply the blood-vessels of the periphery.

The white rami are composed of visceral and vascular fibers, which are medullated. The gray rami contain fibers which are non-medullated, and are vasomotor in their function. The white rami are of special importance in connection with the question under consideration, in that they influence the functional activities of the alimentary canal. Certain of these medullated fibers of the white rami pass from the cord between the second dorsal and the second lumbar nerve, to supply the viscera and blood-vessels, which, according to Gaskell's nomenclature, are called splanchnics. These have been divided into three sets, according to location: 1, thoracic; 2, abdominal; 3, pelvic. The abdominal splanchnics consist of three main nerves, or trunks, designated the greater, lesser, and smaller splanchnics. The first is formed by branches from the sixth to the tenth thoracic ganglia. It pierces the crus of the diaphragm, and joins the solar plexus. The second or lesser splanchnic is formed by branches from the tenth to the eleventh ganglion. It pierces the diaphragm and joins the solar plexus. The third or smallest splanchnic arises from the last ganglion, pierces the diaphragm, and terminates in the solar plexus. These three nerves frequently communicate with one another, and all end in the aggregation of sympathetic nerve substance located posteriorly to the stomach and surrounding the celiac axis.

From this, the greatest of the sympathetic nerve-centers, fibers are distributed to all parts of the abdominal viscera. Its functions are to control the secretory, vasomotor, nutritional, and visceral ganglionic activities. The secretory functions of the intestinal glands are directly under the control of Meissner's plexuses, which are located in the submucous coat of the intestine, and are influenced by the solar plexus.

The vasomotor functions are controlled by means of fibers reaching the blood-vessels through the splanchnics, the greater splanchnic being the largest vasomotor nerve of the body. The nutritional and visceral ganglionic activities of the intestine, while under direct control of the visceral or automatic ganglia, are predominated over by the solar plexus. The independence of action possessed by the visceral ganglia is observed in the rhythmic peristalsis which occurs in the intestine when removed from the body. This is well illustrated in the intestine of the dog.

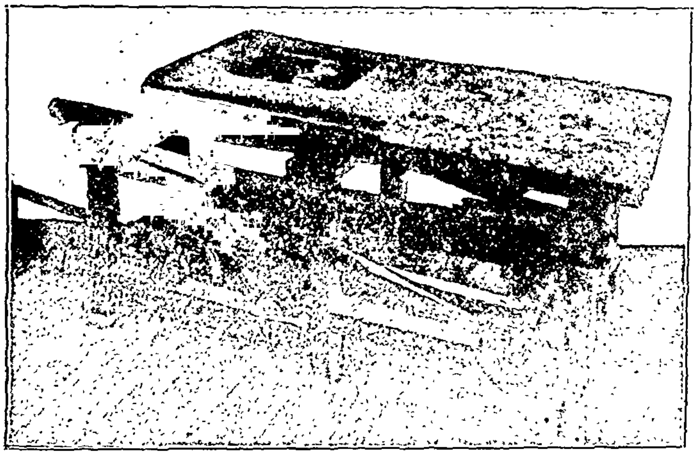
Auerbach's plexuses, between the longitudinal and circular coats of the intestine, extending from the esophagus to the rectum, are automatic motor centers, and it is through the influence of these that it is possible for peristalsis to take place in the intestine after removal from the body When these centers are uninfluenced by any stimulus, there is a condition of aperistalsis.

While the automatic motor ganglia are found in both the large and small bowel, there is considerable difference in the rapidity of the peristaltic wave in each. The nerves influencing the small intestine cause rapid peristaltic movements, while those controlling the large bowel and rectum cause slow movements. This difference in activity between the large and the small bowel is undoubtedly due to the difference in innervation; the small bowel is influenced by fibers from the solar plexus, while the inferior mesenteric ganglion of the sympathetic system influences part of the transverse and the descending portion of the colon, the sigmoid flexure, and the rectum. It is a well-known fact that the peristaltic action of the alimentary canal is largely under the influence of the blood-supply, the latter in turn being controlled by the vasomotor nerves.

The relative amounts of oxygen and carbonic acid gas contained in the blood determine to a considerable degree the rapidity with which peristalsis takes place. The greater the amount of oxygen present in the blood, the less the peristaltic movement; and the greater the quantity of carbonic acid gas present, the greater the peristaltic action. In the absence of other stimuli, and when blood containing a normal amount of blood-gases passes through the intestinal blood-vessels, the usual normal peristaltic movements occur.

The abdominal splanchnics, which contain inhibitory, motor, vasomotor and sensory nerve-fibers, when stimulated, materially alter the peristaltic movements of the small intestine. When the blood-supply of the intestine is normal, stimulation of the splanchnic inhibits peristalsis; when there is an increased amount of blood in the intestinal vessels, stimulation augments peristalsis. The opposite is true when there is an increased amount of arterial blood circulating through the intestinal vessels. The inhibitory fibers are easily exhausted by an increased amount of venous blood. The stimulation of the splanchnics after death always causes peristalsis, which is in all probability due to the fact that there are motor fibers present which remain excitable for a longer time than the inhibitory fibers. The vasomotor function of the splanchnic is observed by the constriction of the blood-vessels which takes place when it is stimulated. When the nerve is severed, there is dilatation of the intestinal vessels. The sensory function of these nerves is observed in the painful conditions arising in certain disorders of the abdominal viscera.

While the functions of the alimentary canal are almost entirely under control of the sympathetic system, the cerebrospinal system has a modifying influence through the action of the vagus on the stomach and the upper portion of the small intestine, and the action of the sacral nerves on the sigmoid flexure and rectum. In certain diseases of the central nervous system, obstinate constipation results from a disordered state of the reflex mechanism governing the sigmoid flexure and rectum. As a result of this condition, the large bowel is unable to unload itself, while the small intestine keeps forcing its contents onward, thereby overloading the fecal reservoir, and producing obstinate constipation.



KNEADING MACHINE.

Constipation, then, may be considered a symptom characterized by prolonged retention of feces in the alimentary canal, caused primarily by inhibitory influences acting on the motor, vasomotor, secretory, and sensory mechanisms of the alimentary canal. As these mechanisms are chiefly controlled by the sympathetic system, constipation might properly be termed a neurosis of this system.

The etiologic factors in the production of the disorders which give rise to the symptom constipation are many, and, as previously indicated, are those which exercise an inhibitory influence on the motor, vasomotor, secretory, and sensory mechanisms of the canal. The motor mechanism may be disturbed either generally or locally; generally, by anything causing an atonic condition of the muscular or glandular activities of the canal, as cancer, diabetes, chlorosis, anemia, etc.; locally, by strictures, sacculæ, tumors, gravid uterus, enlarged prostate, or anything which locally interferes with peristalsis. Localized pain from hemorrhoids, fissures, tumors, etc., is also an etiologic factor in the production of constipation. This is undoubtedly caused by the individual shrinking from evacuating the bowels because of the accompanying pain. This failure to evacuate soon interferes with the visceral rhythm, which, together with the retained fecal matter distending the canal, soon renders the musculature inactive. Although capable of acting independently, the vasomotor and secretory mechanisms in the main act in unison. This is due to the close relationship existing between the two mechanisms, each being more or less dependent on the other.

Since the amount and character of the secretion depends largely on the amount and character of the blood, a condition of intestinal anemia means an absence of intestinal secretion, which has a tendency to produce intestinal constipation. In these disorders in which there is a diminished amount of secretion, as fevers, and diabetes, constipation is a common symptom. In persons whose occupation keeps the perspiratory glands overactive, constipation is of common occurrence. Failure to respond promptly to the demands of nature in this respect interferes with visceral rhythm and soon results in a constipated condition of the bowels.

Constipation is more common in females than in males, due in part to the more sedentary and indoor occupation of the former, and in part to woman's manner of dress, which limits the action of the intestine, and is also a causative factor in the production of enteroptosis. Chronic constipation is a symptom in active and chronic disorders of the brain and cord, as meningitis and myelitis, and is also observed in tetanus. Diet undoubtedly plays an important rôle in the production as well as the relief of this symptom. It is a well-established fact that dyspepsia, with its long train of varying symptoms, of which constipation is a frequent one, has improper food for its origin in the majority of cases.

Drugs, which are almost universally used for the relief of constipation, are certainly one of the chief causes of chronic constipation; but their use usually relieves the symptom by producing another of an opposite character, and one just as disagreeable to the patient. Instead of removing or curing the causative factors, purgatives, by their stimulation of the motor and secretory mechanisms, temporarily increase the sluggish peristalsis, thereby giving temporary relief. After the effect of the drugs has been expended, the original state of sluggishness, but to a greater degree, is usually reached, requiring a more powerful purgative to produce evacuation. This drugging process is frequently kept up until both the patient and the physician nearly exhaust themselves in trying to effect a cure.

Sometimes it is difficult to decide whether or not a person is suffering from constipation, because of the fact that what may be a normal number of evacuations for one person is inadequate for another. However, in a very large percen[illegible]e of cases, one no[illegible]ation in twenty-four [illegible]ered suff[illegible] two evacuations in this period, or one in forty-eight hours, may be considered normal for a smaller percentage. In some one movement per week seems to be sufficient. Besides the retention of fecal matter, there is generally a sense of fulness, lassitude, mental depression, or headache; the tongue is usually coated; the breath may or may not be foul. These conditions are usually relieved as soon as a free evacuation is obtained, but will return again if fecal matter again accumulates. If the bowels remain constipated for a considerable length of time, symptoms of autointoxication are likely to appear. Under such conditions there is likely to be great depression, loss of appetite, sick headache, and even melancholia.

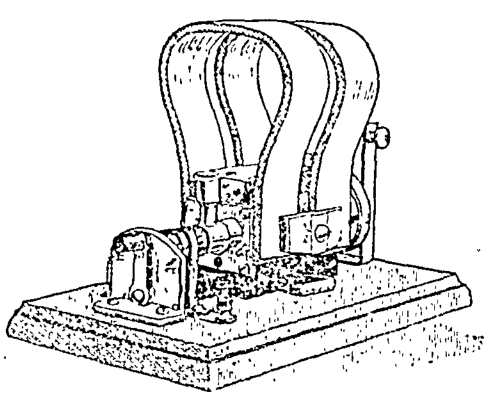
The diagnosis is usually easily made, the patient referring to this particular symptom along with a list of others common to digestive or other disorders. In some cases the diagnosis is not so readily made, and careful physical examination is required before the true condition of affairs can be learned. Diarrhea sometimes accompanies some of the worst cases of fecal impaction, due to the hardened fecal material producing severe irritation, which excites peristalsis, resulting in frequent expulsion of part of the bowel contents.

The prognosis of chronic constipation is favorable unless there is some change in the canal which is not readily remedied. The prognosis is usually favorable, being most so for those patients who can obtain treatment in a thoroughly equipped and scientifically conducted medical institution. While there is perhaps no other symptom so readily relieved by the use of drugs, it is a fact that the fewer drugs used in its treatment the better, for in the vast majority of cases their use is an irrational procedure. It is true that drugs usually promptly relieve the symptom and the patient is satisfied for the time being, but sooner or later the difficulty will return with renewed vigor, and a stronger purgative will then be needed to effect an evacuation. The remedies which once gave such prompt relief have not only failed to effect a cure, but, on the other hand, have been the means of contributing to the causative factors already at work in the production of this symptom.

Constipation, like any other symptom of a general disorder, must of necessity be relieved by directing the remedial agents at hand toward the removal of the cause. The methods of treatment which have been found to be most satisfactory in the cure of chronic constipation are unfortunately such that many of them can not be employed by the general practitioners so as to give the most satisfactory results. Many of these patients require the combined effects of a most carefully regulated diet, hydriatic and electric applications, mechanical and manual Swedish movements, and carefully regulated exercises.

In the treatment of chronic constipation the question of diet is of paramount importance. It is through this channel that the foundation of most digestive disorders is laid. Dyspepsia, so universal in America that it is sometimes termed "the American Disease," is largely caused by dietetic errors, the principal one being undercooked and imperfectly disintegrated starchy foods, giving rise to amylaceous dyspepsia. Fermentation from this cause results in the production of poisonous substances, these in turn giving rise to autointoxications. These poisonous substances circulating in the blood have a deleterious influence on the delicate structures of the nervous system, which react in various ways, giving expression to the almost innumerable symptoms common to the different forms of digestive disturbance. The use of condiments and highly seasoned foods has a powerful influence in causing inactivity of the bowels.

The writer is of the opinion that the diet is one of the first factors to be considered in the establishment of a cure for chronic constipation. The patient should be instructed to adopt as nearly as possible an aseptic dietary. This should consist of foods containing the proper amount of carbohydrate, nitrogenous, and fatty food substances required to nourish the body properly. The carbohydrate foods, which make up the largest share of our food, should be taken in the most easily digested and assimilable form obtainable. Foods containing a very large percentage of starch should be thoroughly cooked. Ordinary cooking by means of boiling is not sufficient, for the raw starch by this process is simply changed to amylodextrin, or soluble starch. The soluble starch, however, can be further digested by means of dry heat. When starch is subjected to a very high degree of dry heat, or moist heat under pressure for a sufficient length of time, it is converted into erythro- and achro-odextrin. The latter, when subjected to the action of the saliva, is converted by the ptyalin into maltose, a product capable of immediate absorption. Food prepared in this manner is so readily digested and absorbed that it relieves the stomach and intestine of the burden of retaining a large amount of starchy material which, under the favorable conditions frequently met with in disorders of digestion, is so prone to undergo putrefactive changes. By the use of such thoroughly cooked starchy foods these fermentative changes are lessened, or entirely checked. The question of nitrogenous and fatty food substances is also an important one. The animal kingdom is relied on to a large extent to furnish these two important elements. The readiness with which animal foods undergo putrefactive changes renders them questionable, especially for those cases in which fermentative changes readily take place. The nitrogenous and fatty material, which can readily be obtained in sufficient quantities and proper proportions from grains, including the legumes, and edible nuts, does not have the tendency to decompose that the same foods from the animal kingdom do. Besides possessing this important qualification, grains are also a very wholesome and economic source of food-supply. When one buys a pound of zwieback or rice, he is not paying for 70 or 80 per cent. of water, as he does when he buys a pound of beefsteak. On the contrary, he is getting more than 80 per cent. of food; he is also obtaining his food direct from nature's garden, and not allowing it to be utilized by some other animal no more capable of storing up energy from it than himself. The use of such pure foods, properly cooked, can not have other than a normal influence on the digestive tract.



Another source of food-supply which might be drawn upon more extensively to good advantage is fruits. In these the quantity of nourishment is not great, but what is present is readily digested and assimilated. Nature does in the fruit, during the ripening process, what art does in the cooking of starch by dry heat, i. e., she converts the starch into sugar. Besides the sugar—and a greater or smaller amount of nitrogenous and fatty food substances—which varies according to the variety, fruit contains succulent juices which promote an abundant flow of the digestive fluids, and furnish the body with a considerable amount of pure water and salts, both of which are essential to proper metabolism. Most fruit juices also have an inhibitory action on germ growth. From the three sources of food mentioned, viz.: fruits, grains, and nuts, an ideal dietary can be selected for both the sick and the well. It was the original diet of man, as outlined in Genesis, and a dietary that will make a sick man well and keep him well. George Cheyene, in his essay on "Health and Long Life," written in 1725, says, "Animal food and strong liquors seem not to have been designed for man in his original make and frame, but rather indulged, to shorten the antediluvian length of life, in order to prevent the excessive growth of wickedness."

In selecting a dietary for a patient troubled with chronic constipation, such dry foods as zwieback, browned rice, etc., are found to be palatable, easy of digestion, and at the same time to present bulk enough to excite gentle peristaltic movements. Nuts, in order to be of service, should go through a special process of preparation. At the present time such specially prepared nut foods as protose, nuttolene, malted nuts, granuts, bromose, and a number of others, can be found on the market. A careful analysis of these nut foods has been made in our laboratory, and they have been found to be sterile and wholesome, and to contain nitrogenous and fatty material in proper proportions to meet the demands of the human economy. A diet consisting of granose, browned rice, protose, steamed figs, prune marmalade, and ripe fresh fruits such as apples, strawberries, oranges, etc., almond butter, and cream, is so palatable, nourishing, and easy of digestion that the most fastidious epicure could find no fault with it.

The patient should be instructed to use no liquid with his meals, other than that which is contained in the food. A glass of cold water half an hour before each meal, and as much hot or cold water as is desired 2½ to three hours after each meal, will prove beneficial. He should also be instructed to eat the dry food at the beginning of the meal. The dryness of the food will necessitate thorough mastication and insalivation, resulting in the thorough digestion of the starch.

After arranging a proper dietary and giving the patient explicit directions concerning it, treatment should be instituted at once to relieve him of the accumulated mass of fecal material. This can usually be done by means of cleansing enemas of warm water, using from one to two quarts at a temperature of 100 to 102 F.; if this fails, two ounces of olive or sweet oil followed by a strong solution of soap-suds, one to four pints, at a temperature of 100 to 102 F. The cleansing enemas should be employed for three successive days, and should be followed by the graduated enema, which is given as follows: The first day after the last cleansing enema use seventy-two ounces of water at a temperature of 102 F.; the second day, 64 ounces at 98 F.; the third day, 56 ounces at 92 F.; the fourth day, 48 ounces at 88 F.; the fifth day, 40 ounces at 84 F.; the sixth day, 32 ounces at 78 F.; the seventh day, 24 ounces at 74 F.; the eighth day, 16 ounces at 70 F.; the ninth day, 8 ounces at 64 F.

The effect of this treatment is to keep the lower bowel from becoming obstructed, and at the same time to give tone to the walls of the bowel by gradually reducing the temperature and the amount of water used. The impressions thus made on the mucous membrane of the bowel reflexly excite the splanchnics, which in turn, through Auerbach's and Meissner's plexuses, excite normal peristalsis. This treatment should be taken at the same time each day to establish a rhythmic movement of the bowel. The cold also stimulates the secretion of the liver, and the portal system, which in turn affects the intestinal circulation. Besides the graduated and cleansing enemas, other hydriatic procedures, such as the hot enema, the cold enema, the umschlag or moist abdominal bandage, the cold sponge both, cold mitten friction, cold douches, and alternate hot and cold douches to the abdomen, wet sheet pack, and cold sitz bath, are very effective through their influence on the sympathetic centers and splanchnic nerves in exciting the various functional activities of the intestine. The Scotch douche, which consists of rapidly alternating applications of heat and cold, when applied to the abdomen, has a strong tonic influence on the abdominal muscles and also on the involuntary muscles of the intestine. So far as external applications are concerned, the Scotch douche is the one par excellence in exciting to greater activity the motor, vasomotor, and secretory functions of the abdominal viscera.

Abdominal massage, both manual and mechanical, is a very valuable aid in strengthening the abdominal and visceral muscles. Special movements to replace viscera are also valuable. An atonic condition of the abdominal muscles favors enteroptosis, which might properly be termed an etiologic factor in chronic constipation. By properly executed massage movements the abdominal muscles are strengthened and the viscera replaced. In cases of prolapsus of the stomach, after replacement by means of carefully executed manual Swedish movements the organ may be retained in place by the natural abdominal supporter. Great relief is frequently experienced by the use of this support.

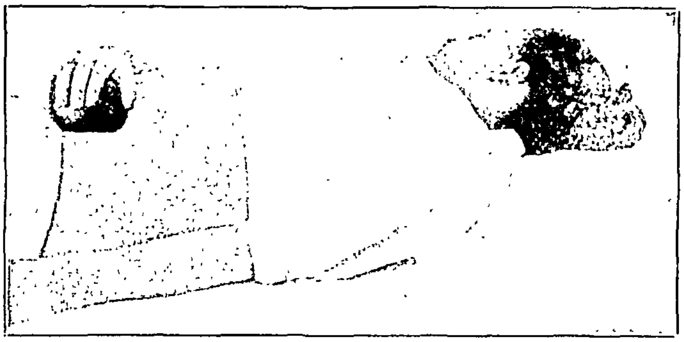
The support should be adjusted while the patient is in a reclining position.

The value of abdominal massage in the treatment of chronic constipation has received insufficient attention, undoubtedly from the fact that there are comparatively few scientifically trained masseurs. The bungling work frequently done by many masseurs, instead of giving satisfactory results, has frequently resulted in increasing the patient's discomfort. When given properly massage works wonders in relieving a constipated condition of the bowels: by it the blood-supply is increased, the musculature is toned up, normal secretory functions are established, all of which aid in the re-establishment of a normal peristalsis.

Mechanical devices have been constructed, which, when judiciously employed, give excellent results. Of these the one employed in giving abdominal kneading is of great service in relieving constipation. The apparatus consists of a table with a large aperture near the center of the top. In this opening plays a series of six vertically-placed bars. Each bar is separately connected with an eccentric, to give it an independence of motion. When in motion, these bars have an undulatory movement. The top of the table is so constructed that with each vertical movement of the bars it moves back and forth, thus bringing the entire abdomen in contact with the kneading bars.

Cannon-ball massage is a valuable adjuvant to other forms of mechanical and manual treatment. This treatment may be employed by the patient himself. It consists in rolling a four-to-six-pound cannon-ball covered with leather over the colon from right to left.

Electricity, although little utilized for the relief of the condition under consideration, in many cases can be used with good results. This is particularly true of the sinusoidal current, which can be used with great advantage where there is an enteroptosis due to relaxed abdominal muscles. When the abdominal muscles are relaxed, the stomach, bowels and other viscera become pendant, and drag on the branches of the prevertebral ganglia of the abdomen, resulting in reflex disturbances which give rise to pain and other symptoms, among which constipation is not an infrequent one. After replacement of the viscera, the application of the slow sinusoidal current to the abdominal muscles, produces results which can not be accomplished by any form of passive exercise.



CANNON-BALL MASSAGE.

By means of a rectal electrode introduced into the rectum, and a pad electrode placed over the abdomen, the musculature of the lower portion of the alimentary canal can be gently exercised by the rapid sinusoidal current. This form of treatment gives most excellent results in those cases in which there is a semiparalyzed condition of the musculature of the rectum due to failure on the part of the patient regularly to evacuate the bowel.

Exercises calculated to develop the body as a whole, and especially to develop the abdominal muscles, are of great importance. If the general musculature of the body is in an atonic condition, that of the alimentary canal is likely to be in a similar condition, and vice versa.

It is indeed surprising to note the readiness with which a functionally disordered sympathetic system will respond to such rational measures as have been outlined, and when these are directed toward assisting the *vis medicatrix naturæ*, the most gratifying results are obtained.

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One of the features of the Exposition of Hygiene at Naples is a reproduction of the heating, lighting and water-supply arrangements of a Pompeiian house. Naples now boasts of the finest water-supply in the world since the waters of the Serino have been piped into the city, and the transformation of most of the famous Naples slums into handsome boulevards during the last ten years is an interesting feature to be seen in connection with the exposition.

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# THE PATHOLOGY OF CRIMINAL ABORTION.*

BY MAXIMILIAN HERZOG, M.D.
PROFESSOR OF PATHOLOGY IN THE CHICAGO POLICLINIC.
CHICAGO.

The pathology of criminal abortion has to establish: 1. The causal nexus of premature expulsion of the ovum with the employment of internal medicinal or external mechanical means, adopted for the accomplishment of the desired criminal attempt. 2. To account for the illness or death of the mother during or after abortion.

The latter part of our subject, that referring to death of the mother, is comparatively easy to handle, because in the latter event cases have been frequently thoroughly investigated. The employment of modern histologic and bacteriologic methods to clear up the pathology of such cases is within easy reach. It is different when we approach the other part of our task. It is a notorious fact that only a small minority of the non-fatal cases, more particularly of the cases not complicated with serious, threatening disease of the mother, ever come to the notice of reputable, scientific members of the profession. Consequently our observations are made on a very small fraction of the cases, of which necessary details are, as a rule, lacking. Our data, therefore, lack reliability when we want to draw correct conclusions or establish general principles. Nor is the numerical insufficiency of the material that may be studied, compared with the enormous total figure of cases, the only ground why our conclusions must be unsatisfactory. The main reason lies in the fact that we know so little about the intrinsic cause of causes which normally lead to the beginning of the act of parturition at full term.

By far the largest number of criminal abortions are brought about by internal, medicinal agencies which enjoy the reputation of being "reliable abortifacients."

Lewin, in a recent extensive monograph on "Abortion by Poisons and other Means," considers in general and in special the dynamics of these abortifacients. In the subsequent consideration of the physiologic and pathologic effects of these abortifacients, we follow the views of the distinguished pharmacologist who has gone over the subject in a very thorough manner.

Lewin states that there are certain medicinal and other preparations which have the property to primarily or secondarily exert a pathologic influence over the uterus and the ovum contained in it. We possess certain poisons which can influence the uterus in such a manner that phenomena similar to those in parturition are produced and that the ovum becomes detached from the fruit bearer. But all internal means which, if taken in sufficiently large doses, may bring about this cycle of changes, are substances poisonous to mother and child alike. They have the property to bring about morbid disturbances of physiologic functions. Even a premature irritation of the muscularis uteri itself must be looked on as something pathologic attaining its highest degree in tetanic contraction. Abortifacients can neither theoretically nor practically be looked upon simply as means to produce prematurely a normal labor. In fact the labor and expulsion are generally brought about secondarily. The primary factors are the damaging pathologic influences disturbing the nutrition, or killing the embryo outright. Internal abortifacients generally act first by indirectly disturbing the nutrition of the embryo, by making the mother sick or even moribund, by producing hemorrhages and by detaching the ovum from the uterus. Artificial abortion by internal means is to be judged in the same light as spontaneous abortion in consequence of disease of the mother such as syphilis, typhoid, etc. The hemorrhages caused by internal abortifacients occur between the fetal membranes, into the amniotic cavity or into the placenta; they lead to a loosening or to a separation of the ovum.

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*Read before the Physicians' Club of Chicago, March 26, 1900.

Other pathologic processes noticed in connection with the internal use of abortifacients are hyperemias in distant organs of the mother, inflammatory processes in the gastrointestinal tract, the pelvic organs and in the ovum and its envelopes. Some abortifacients primarily and particularly act on the gastrointestinal tract and extend their influence secondarily only to the pelvic organs.

As a rule, the ovum is expelled when the toxic effects of the internal abortifacient reaches its climax, or shortly after this period.

A few of the more commonly used internal means to induce criminal abortion may be cited to show how these substances act as poisons producing grave pathologic processes, damaging both mother and child. The pathology of some of these drugs and chemicals has been studied in a number of fatal cases and also experimentally on animals.

Phosphorus, used extensively as an abortifacient in some countries, for instance in Sweden, brings about the general symptoms and changes of systemic poisoning and acts as an abortifacient by producing hemorrhages which detach the fetal membranes. This has been shown experimentally on pregnant bitches.

Oleum rutæ produces gastroenteritis, metritis and hemorrhages.

Tansy (Tanacetum vulgare) has in fatal cases brought about convulsions, cyanosis, spasmodic respiration, hemorrhages from the lungs and bloody discharges from the uterus and vagina.

Aloe, when used in doses large enough to bring about abortion, produces inflammation of the pelvic organs subsequent to gastroenteritis, nephritis, and hemorrhages between the fetal membranes.

Oleum sabinæ, one of the most powerful means to bring about tetanic contractions of the uterus on account of its supposed action on the lumbar centers, produces hemorrhagic inflammation in the gastrointestinal tract and in the kidneys. In a fatal case of abortion produced by Savine, a perforation of the stomach was found post-mortem.

Ergot, which has been used for more than a thousand years, in China, and which is first mentioned in Germany as an abortifacient in 1573, causes tetanic uterine contractions, contraction of arteries in general, increase of the blood-pressure, general convulsions.

From the studies which I have made on the normal and abnormal uterine placenta and the placenta in tubal pregnancy, I am inclined to believe that the first step in bringing about spontaneous abortion is very frequently a hemorrhage into the intervillous space and hemorrhages into the spongy layer of the decidua serotina. These hemorrhages come from the utero-placental sinuses, and their effect must be, as a rule, a loosening, eventually a separation of the ovum. It appears to me that a number of internal abortifacients act in the same manner. They first produce poisoning of the mother with circulatory disturbances and changes in the blood-pressure; these then lead to intervillous hemorrhages and hemorrhages into the spongiosa of the decidua serotina and loosening of the ovum. In this manner the pathology of the induction of premature delivery by internal abortifacients would be entirely analogous to the initiatory steps in spontaneous abortion.

Criminal abortion is often brought about by external and mechanical means and manipulations, instrumental separation of the fetal membranes, perforation of the amniotic cavity, introduction of a foreign body into the uterus, etc. As long as these manipulations do not lead to an infection or a serious trauma, with or without an infection, there is little to be said about them from a pathologic point of view.

If, however, as so frequently does, serious trauma and infection occur, then we meet morbid processes and changes which are of much pathologic interest. The question may here be asked: Is the danger of infection after criminal instrumental abortion greater than after the legitimate induction of premature labor? The danger in the former case is *per se* not greater than in the latter case. But criminal instrumental abortions rarely, if ever, are performed by careful, conscientious aseptic physicians, but, as a rule, by unscrupulous uneducated individuals unacquainted with the theory and practice of modern asepsis. For this reason criminal instrumental abortions are so frequently followed by septic complications. Grave traumatism is also one of the complications often met with in successful as well as unsuccessful attempts at criminal abortion.

Marsais collected 68 cases of wounds of the uterus produced in the performance of instrumental criminal abortion. Maschka reported 5 cases of fatal perforation of the uterus during attempts to rupture the membranes. Death occurred from septic peritonitis. Hektoen, Denslow Lewis, Henrotin and a large number of others have published reports of such cases of rupture of the uterus. The instruments used for manipulations to induce premature delivery in making perforating wounds have sometimes slipped away from the operator and have entered the pelvic or general abdominal cavity. The accident of perforating the uterus may, *per se*, not be followed by any dangerous sequelæ or complications, and pregnancy may go on undisturbed or a uterine pregnancy may be changed into an abdominal one, the fetus escaping through the wound of the uterus into the general abdominal cavity. Cases of the latter type have been reported by Leopold and Henrotin. The factor which constitutes the great danger in serious or even minor traumatism produced in attempts at criminal abortion is the same that threatens in every manipulation to induce premature delivery, namely, the occurrence of infection. By far the majority of cases of instrumental criminal abortion, with or without serious traumatism, which end fatally succumb to sepsis, which manifests itself in the form of septic pelvic or septic general peritonitis. The local reaction is characterized by a seropurulent, or fibrinopurulent exudation found on the pelvic or abdominal peritoneum or on both. In cases rapidly fatal, the local changes are often circumscribed and confined to small areas. In subacute cases there may be abscess in the uterine muscularis, the parametrium and perimetrium. Lingering cases of sepsis after abortion often develop distinct metastatic abscesses in joints, and metastatic septic endocarditis. A form of circumscribed septic infection of the pelvic organs following criminal abortion, to which Henrotin has repeatedly called attention, is the ovarian abscess. For such ovarian abscesses following abortion the corpus luteum verum, or a corpus luteum cyst furnishes the fertile soil for the primary seat of the septic process. The latter may remain localized if operation through the vagina is done in proper time, or it may lead to a fatal general septic peritonitis. It has been my privilege within the last three or four years to examine a number of Dr. Henrotin's cases of ovarian abscess following abortion, and I have found in such cases, as the cause of the septic process, staphylococci, streptococci, diplococci, and the colon bacillus.

Tetanus has also been observed following criminal instrumental abortion with severe traumatism. Sudden death in consequence of embolism has been recorded following intrauterine manipulations with instruments and intrauterine air, water, or glycerin injections.

If now we attempt to outline the general principles of the pathology of the criminal abortion, we may perhaps characterize them as follows:

1. Premature expulsion of the ovum, if it occurs as the result of the internal administration of abortifacients, is an integral part of the general toxic symptoms, changes and processes due to those drugs or chemicals, acting in their deleterious influence on both mother and child.

2. Premature expulsion of the ovum if it occurs after detachment of the membranes, perforation of the amniotic cavity, etc., is brought about, because after such manipulations which may or may not bring about the speedy death of the embryo, the ovum acts as a foreign body and stimulates the uterine muscularis to contractions, or because intervillous or interdecidual hemorrhages occur.

3. Septic infection in its broadest sense, following criminal abortion is—*ceteris paribus*—not fundamentally different in its general and special pathology, its sequelæ and complications from other septic infections.

I have almost entirely neglected a pathologic consideration of criminal abortion brought about by copious hot douches, irritating applications to the cervix, etc. I have not been able to find a firm physiologic basis for even a modest attempt at explanation of the causal nexus between these means and the desired or accomplished result. I have to repeat in this respect, in conclusion, what was said above in the beginning: The trouble in trying to clear up the intrinsic pathology of certain types of criminal abortion lies in the fact that we practically know nothing definite about the primary factors which initiate normal labor at full term.

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# COMPLETE OCCLUSION OF BOWEL.

BY DWIGHT E. CONE. M.D.
BINGHAMTON, N. Y.

Nov. 2, 1899, I saw Mrs. A. B. R., of Greene, N. Y., in consultation with Dr. Williams of that town, who gave the following history: An American, aged 63, her family history was good. She had been married for forty-five years and had one child forty-two years ago. She had been troubled with what she called "bilious" attacks ever since she could remember. About thirty-five years ago she had a very severe illness which was described as inflammation of the bowels and, though "given up" to die, she gradually recovered. Since that time her troubles with her stomach, or "bilious attacks," have been more or less constant.

On September 4, last, she was attacked with vomiting and free purging, and after a week felt some better. In a few days there was another and one week later a third attack lasting about one week, after which there was no more purging, but the stomach sooner or later rejected everything taken, nothing having been retained for more than ten hours.

She was attended by a homeopath for four weeks and, for the week previous to my seeing her, by a clairvoyant. Dr. Williams saw her for the first time about six hours before my arrival. There had been rapid emaciation, due to inability to retain any nourishment except rectal enemas, while these had not been able to keep up the vital forces. Temperature was 99; pulse 84 and feeble. There was no headache, and but slight soreness over the abdomen, though no point of marked tenderness. The bowels were much distended with gas so that their outline could be easily discerned through the abdominal wall. There was no dulness on percussion, but tympanitis everywhere. The urine was practically normal. Everything given by mouth distressed her, with the exception of 1/10-gr. doses of calomel and a small quantity of peroxid of hydrogen and "alkalol" in water. There had been no movement of bowels for four weeks, except as enemata were given, and the question that confronted us was whether the obstipation was due to some obstruction or paralysis of the muscular coat. The vomitus consisted of whatever might be taken, together with a tasteless and odorless frothy mucus. On November 5 there was no change in conditions, except that the patient was weaker and more easily exhausted. A saturated solution of sulphate of magnesia to the extent of twenty-four teaspoonfuls—a teaspoonful every ten minutes—was given with no result. Gentle massage over the bowels seemed to give relief. A large enema brought some fecal matter and gas. On November 9, when I saw her for the third time, the pulse was very rapid and the vital forces nearly exhausted, the temperature being 97, the pulse 132. There was no fecal vomiting, although the stomach refused to retain even water. There was no pain, except distress produced by distension of the bowels with gas and pressure against the diaphragm. Deeming the case *in extremis*, I advised against any operative measures. The patient died November 10.

Autopsy was held November 11, with Drs. Williams of Greene, Hitchcock of South Oxford and myself present. The body was very much emaciated and the abdomen tympanitic from the distended bowel. An incision extending from the ensiform cartilage to the symphysis disclosed no subperitoneal fat. The cecum and colon, ascending and transverse, were enormously distended with gas, the small intestine but slightly distended. At the junction of the transverse and descending colon there was a constriction five-eighths of an inch in length and three-quarters in diameter, which completely occluded the lumen of the bowel. On the gastric side of the obstruction there were five old cicatrices, probably from ulcers which had existed at some time, but were now only in evidence by their scars.

There was about one quart of liquid feces in the large intestine, and probably much more in the small, but there were no enteroliths larger than a pea and very few of these. On the mesenteric side of the constriction there was a firm band of adhesion, fan-shaped, with its broad extremity attached to the parietal peritoneum. Attempts to loosen this attachment caused the bowel to rupture on the gastric side of the obstruction. The bowels were emptied of gas and feces and the diseased portion excised. The liver was displaced to the left so that the left lobe lay entirely to the left of the stomach, and the right lobe lay directly on the stomach, as did the distended colon. The stomach was empty.

All the organs in the body were healthy and normal with the exception of the point described in the colon. This constricted part consisted of cicatricial tissue only, indicating that it was caused by ulceration and destruction of mucous and muscular coats of the bowel, and subsequent contraction.

The chief points to me are: 1. Why did we not get fecal vomiting? 2. Why did she not have either localized pain, tenderness or headache? 3. Why had this existing condition of incomplete closure not sooner become complete? 4. Should anything have been done for this patient in the line of surgical operation at the time I saw her?

My answer to these questions would be as follows:

1. The fact that the obstruction was so far removed from the stomach and the enormous size of the bowel beyond the ileocecal valve will in a measure account for our not getting fecal vomiting. Also the pressure of the liver and the colon on the stomach prevented the accumulation of any amount in the stomach, forcing it back by mechanical pressure and thus not only preventing the accumulation of food, but also acting as a cut-off for anything regurgitating from the bowels.. Another thing is the length of intestinal tract available for absorption.

2. It would be conjectural to say why she did not have either pain, localized tenderness or headaches. My theory is that in the attack in September last, enough irritation was produced at the ulcerated point to cause inflammatory action sufficient to entirely close the lumen of the partially occluded gut, thus producing complete intestinal obstruction, but so low down in the bowel that absorption still took place. Her diet had been very simple and so little of it was retained after complete closure that there was not enough excrementitious matter to produce auto-infection. The real mischief, in my opinion, was done thirty-five years ago, hence there was no acute congestion or pressure on nerve filaments, but simply the discomfort caused by the great balloon in the abdominal cavity.

3. As to why this existing condition of almost complete closure had not sooner become complete, her history was that for the past three years her bowels had been more regular and her health much better, until the attack in September. Still, the same caution in regard to the diet had to be observed. Now why it did not sooner cause a wreck, no one knows.

4. As to whether anything should have been done in a surgical way at the time I saw her, I presume many would say a resection should have been made at once. But we should bear in mind that Dr. Williams had seen her but a few hours before I saw her, also for the first time. We had nothing but her history as given us, and she was then so weak that she would have to rest after every sentence and then the sentence had to be short. Her emaciation was marked and there was no vital energy stored up, the reserve, as the result proved, being nearly exhausted. Again, a median exploratory incision would not have given room to operate on the diseased portion, and the only way would have been to close the central incision and make an oblique incision parallel with the ribs on the left side, directly over the constricted portion of the bowel. This would have been a formidable undertaking under any circumstances, even with a large reserve of vital force to rely on for recovery. Still, I feel now that were I to meet a similar condition again, I would urge an exploratory operation.

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THE EDITOR of the *N. Y. Christian Advocate,* Dr. Buckley, recently said that "Christian Science," as a system of therapeutics, would have died ere this if it had not been put forward as a religion; and it would have died as a religion if it had not been put forward as a system of therapeutics.

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# QUININ AMBLYOPIA.

BY M. COPLAN, M.D.

EX-HOUSE PHYSICIAN, LEBANON HOSPITAL, NEW YORK CITY.
CLEVELAND, OHIO.

Mrs. S., with her boy, 3 years old, called at my office on Dec. 2, 1899, stating that her child had not been feeling well for the last few days, and that his bowels were very loose. The family history was negative, the child's complexion was sallow, with slight anemia, and a coated tongue. He looked dull and depressed and refused to answer any question, not taking any interest in his surroundings. Temperature per rectum was 98.8 F., pulse 106, respiration 38. His mother stated that his bowels moved about eight or ten times during the day, that he had no appetite, and had ceased to play as he once did.

I prescribed small doses of calomel followed by magnesium sulphate and an antidiarrheal and tonic mixture, put him on a liquid diet, told the mother that she must keep him in bed, and if he was not better to let me know.

On Dec. 3, at 9 a.m., I was called and found my little patient vomiting, with a flushed face, injected eyes, the surface of the body hot, and asking for water all the time. Temperature per rectum was 102 F., pulse 126, respiration 44. Thoracic and abdominal examination revealed a yellowish skin, enlargement of the liver and spleen, particularly the latter, and tenderness all over the abdomen.

The mother said that "the child felt very cold about an hour ago, and acted as if he would have had convulsions;" also that he complained of feeling cold before, and sometimes he shivered, but she did not pay much attention to it, thinking that it was due to the weather; she was unable, however, to say when he commenced to complain of feeling cold, and how often.

With the aid of the microscope I diagnosed it a case of malarial fever of the quotidian type. I ordered cool sponging and cold lemonade frequently, and prescribed the following:

℞. Quininæ sulph.......................... 3|
Syrup yerbæ santæ comp.....................60|
M. Sig. One teaspoonful t. i. d.

I ordered her, verbally, to give two teaspoonfuls the next morning, about 7:10 o'clock, after the child had taken some food; after that she was to follow the previous directions.

I called on December 4, about 2 p.m., and found my patient asleep, and being informed that he was much better and did not have any attack that morning, I left without making any further inquiry, promising to come earlier the next day. On the following day I saw him about 10 a.m., and was astonished to find him complaining of not being able to see, asking where he was and why they did not light the gas or the lamps.

On questioning the mother, I was told that she gave him two teaspoonfuls four times the previous day, and once on the morning of the same day, so that he had taken about 30 grains in twenty-four hours. On examination I found total blindness of both eyes. The ophthalmoscope showed a pale optic disc, and it was very difficult to make out the condition of the retinal arteries. I at once discontinued the quinin and prescribed strychnin, 1/200 gr. t. i. d. The patient recovered gradually, and on the fifth day, viz., on December 10, could see almost as well as he did before.

A similar case came under [illegible] during [illegible] service at the Lebanon H[illegible] [illegible]ry I [illegible] describe in brief:

Mrs. H., aged 30, was admitted to the hospital complaining of headaches and having chills and fever. We soon diagnosed a very obstinate case of malarial fever of the duplicated quotidian type, paroxysms taking place between 7 to 8 a.m. and p.m.; temperature ranging between 104 and 106 F. Quinin sulphate, in doses of 15 grs. three times daily, was administered without any effect. Pilocarpin hypodermically, ergot, liquor potass. arsenitis, methylene blue, piperin, succus lemonis, etc., was tried without preventing a single paroxysm. With the approval of Dr. Zemansky, the visiting physician, we gave her quinin sulphate, 30 gr., three times a day, and 45 grs. two hours before the paroxysm usually occurred; the results were most satisfactory, reducing the temperature in the morning to 100 F. and preventing the afternoon paroxysm entirely, the temperature coming down to 99 F.

On the following day, when I made my usual morning rounds, the patient cried out: "Doctor, I am blind, I can't see, where am I!" She had then received 150 grs. of quinin in twenty-eight hours. On examination we found total blindness of both eyes. Dr. Wm. Cowen, the hospital ophthalmologist, examined the patient and found the optic disc pale, and the retinal blood-vessels very much narrowed. We at once discontinued the quinin, and prescribed strychnin sulphate and digitalis, the patient recovering full sight on the eighth day.

Looking up the literature at my command on this subject, while many cases of quinin amblyopia have been reported in adults, very few have been reported in the very young. Burns[1] reported a case where a child, 3 years old, ingested 30 grs. of quinin in eighteen hours, causing amblyopia. Harlem[2] reported one where an adult took 100 grs. in a few hours, causing amaurosis. Elis[3] reports a case where an adult took 120 grs. in twenty-four hours, causing total blindness. All recovered full acuity, except the last one, which only recovered some of his former vision.

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# REPORT OF UNIQUE CASE OF APPENDICITIS, WITH SOME REMARKS ON TREATMENT.*

BY JAMES T. JELKS, M.D.

HOT SPRINGS, ARK.

On the night of April 26 I received a note from Dr. A. S. Garnett, asking me to see a patient with him, in consultation, a woman with the following history: On the Friday previous she was feeling very well indeed and climbed Hot Springs Mountain with a party of friends. Saturday night she was taken ill with pains in the abdomen, which demanded relief. Dr. G. A. Hebert was called and found her suffering with the pain and a temperature of 100 F. He gave her a dose of morphin hypodermically, which relieved her. Sunday she had some pain, with a temperature of 101 F., and this lasted through that day and night. Monday found her free from fever, with normal pulse, but slightly irritable stomach, and vomiting whatever she took. Her bowels responded to a cathartic Sunday night and Monday morning. Tuesday they refused to move, nausea increased, temperature and pulse were normal, and the abdomen began to distend. Wednesday the bowels were constipated and there was no escape flatus; the pulse and temperature were normal and there was considerable vomiting with the bowels greatly distended, little or no pain.

Wednesday night at 11 o'clock she vomited stercoraceous material, and it was at this time that I was sent for and met Drs. Garnett, Greenway and Hebert in consultation; I found the abdomen distended, and slight pain in the epigastric and appendicular region. The vomited material was unquestionably stercoraceous in character. The temperature was normal, pulse 65, full and regular. The face of the patient bore no mark of suffering nor serious illness, whatever. The gentlemen present had diagnosed intestinal obstruction possibly from bands of adhesions. This diagnosis was encouraged by reason of the fact that six years previously she had one ovary removed by the late J. H. Etheridge of Chicago. Her health did not improve after this operation, and one year ago, while in San Francisco, the other ovary was removed. At this latter operation many bands and adhesions were found, hence it was easy for us to believe in the probability of obstruction produced by bands, in the present illness.

In this light of the case I advised surgical interference in the hope of saving the life of the patient. The situation was explained to her and her husband and they readily consented. Thursday morning she was removed to the Ozark Sanitarium, and with the assistance of Drs. T. J. Crofford, of Memphis, A. S. Garnett, G. A. Hebert and John A. Gaines, of Hot Springs, I operated. An incision was made between the umbilicus and pubic regions two inches in length, through the old scar. I found the omentum adherent, hence I enlarged the incision upward until I got above the line of the omental adhesions. These adhesions were separated by the fingers, and I began to look for intestinal hernia over some band. The intestines were very much distended with gas, and very dark in color; in spots quite black. With the assistance of Dr. Crofford they were rolled out and covered with warm, moist, sterilized towels. We searched for twenty minutes or more expecting to find an intestinal hernia over the band or bands. Failing in this we turned our attention to the appendicular region, where we found the gangrenous and perforated appendix, which was removed in the usual manner and the intestines rolled out of the abdominal cavity. We found the peritoneum ruptured in three places, from overdistention with gas. The appendix having been removed, the abdominal cavity was thoroughly washed out with sterilized salt solution; the intestines also received a thorough washing in the same solution; they were now open in two places and, by the use of rubber gloves, they were easily stripped through my fingers and emptied of gas and feces. These openings in the intestines were closed by Lembert sutures and the intestines replaced in the abdominal cavity. Iodoform gauze was carried to the bottom of the pelvis, and around the stump of the appendix; the cavity again washed out with sterilized salt solution and the abdominal wound closed with through-and-through sutures of silkworm gut, and the patient carried to bed in an exhausted condition. Chloroform was used as anesthetic, with occasional changes to ether. Dr. Gaines, the anesthetizer, was compelled to give her two extra doses of strychnin, 1/20 gr. each, but she died at 8:20 p.m. No post-mortem was held.

This case teaches one lesson which was new to me, that a patient may be dying of general septic peritonitis with a normal pulse and normal temperature. In my experience this is unique. Had I known this patient was suffering from a septic peritonitis as the result of a perforated and gangrenous appendix, I would not have operated, because such operations do no good, and bring the work of the abdominal surgeon into bad repute. We may set it down as a rule, to which there are few, if any, exceptions, that general septic peritonitis of thirty hours' duration always results fatally, and that surgery offers these cases no hope.

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*Read before the Mississippi Valley Medical Association, Chicago, 1899

The question of treatment of appendicitis is a very serious one, and is not yet settled. Much has been written on this subject within the last few years. About twenty-five hundred books and monographs have been printed and the last word has not yet been said. As we see the patients they may be divided into two classes, those seen early before pus has formed or before perforation has taken place, and those seen later.

In forming an opinion as to operative or non-operative treatment, two other factors are also to be taken into consideration, viz.: the mortality when treated medicinally, and the operative skill and technique of the operator. Whether we will or not, these last two elements should have considerable weight in determining the line of procedure. For instance, given twenty cases of appendicitis occurring in the course of five years, in the ordinary village or town, are the majority of patients safer under the medicinal or surgical treatment? I am not discussing the ideal treatment under ideal surroundings and by ideal operators. That is probably settled. We have facts to face, not theories. Then what are these facts? A patient in an ordinary house, attended by the average village physician, is seen for two or three days and finally appendicitis is diagnosed, and if he does not operate the village surgeon is called in. Possibly in the course of his ten or fifteen years of practice he has operated on the abdomen as many times, and the doctors decide to operate. What are the facts here? Simply these: it is now too late for an early ideal operation and too soon for the late one. Still, celiotomy is decided on and carried out to the best of their ability. The patient may recover, most probably will die, and in that community operations for appendicitis are discredited. The next patient, when diagnosed early and offered the operation, remembers the result of the former case and declines until perforation and general septic peritonitis is set up, and then consents. The honest surgeon is willing to do all he can to save the patient and, perhaps anxious for the celiotomy and consequent prominence which it will give him, undertakes what is practically a hopeless task. In this community in the long run, which is the safer line for the majority of patients? We do not hesitate to say we believe the majority, under these circumstances, will do better under proper medicinal treatment than under surgical interference.

Again, given an ideal surgeon, with ideal surroundings, and ideal doctors who make an ideal diagnosis, i.e., in the first few hours of the attack, and insist on immediate operation, we dare say the majority of this class of cases under this set of circumstances are far safer with immediate section and removal of the appendix.

Do we get the cases this way? If we do not and have an aseptic conscience and average ability as surgeons, we say operate immediately. When the case is from four to six days' old, the answer should be different. Here we have a different set of circumstances to meet, and the patient will have a better chance for his life if we wait until the acute symptoms have subsided and operate between the attacks. We say between the attacks for it is probable that others will follow.

What are the statistics of medicinal treatment of appendicitis? The answer to this question depends on what to the physician attending any case is an unknown quantity, viz.: the character of the infecting agent, and the powers of resistance of the individual. Could we before have known these conditions, the course we should pursue would be plain.

It may be said that when the patient is one with the so-called catarrhal form of the disease—I do not believe in using such an expression—he will get well under the administration of large doses of sulphate of magnesia. Practically all such recover. On the other hand, if they are what is known as the "fulminating kind," 86 per cent. die if not subjected to very early operative interference. We repeat that, given a case within the first twenty-four hours of its occurrence, in the hands of a surgeon who operates frequently, and whose technique is correct, with proper assistants and nurses, that patient will be safer with celiotomy than without; but when the patient is in the country or village, and seen late in the disease, and seen by the surgeon who does not operate on this class of cases often, we believe the majority of patients will do better without operation than with it.

Doctors are frequently captivated by the work of surgeons in large cities, and when the man says he operated in all cases, the surgeon in a small village thinks he must also do so. He forgets that his opportunities to operate come very seldom, while the other man probably operates for appendicitis, as I have seen them do, two or three times in one day.

The statistics of Dr. John B. Deaver, of Philadelphia, with 468 cases in two years, or Dr. J. B. Murphy, of Chicago, or Dr. H. M. Richardson, of Boston, must be far better than those of the surgeon who opens the abdomen but six or eight times a year. This being the case, we believe much harm may be and is being done by the cry that every case of appendicitis should be operated on as soon as seen, no matter what the stage of the disease or the skill of the attending physician or surgeon.

The result of operation in this disease depends again on whether the section is made during an acute attack, or after the attack has passed off. For instance, many operators have a mortality of 15 to 25 per cent. in acute cases, with no deaths in hundreds of cases operated on between attacks.

In a personal communication from Dr. John B. Deaver, he says that in 196 cases of chronic appendicitis subjected to abdominal section in the last two years, he had no deaths. In 264 acute ones, operated on in the same time—two years—the mortality was 17 per cent. Here we have one of the most successful operators in this country, and yet in acute cases his mortality is 17 per cent. Is the mortality in cases treated medicinally any greater than this?

We can not better close this paper than by giving some statistics recently gathered and published by Dr. Chas. J. Whalen, of Chicago:

> Fiitz says that 26 per cent. and Stimson that 25 per cent. of all cases of appendicitis prove fatal. According to Fiitz, 60 per cent. of 176 cases of perforated apperdicitis died during the first five days, 56 during the first four days, 28 during the first three days, and 8 during the second day, though a large number of cases of simple appendicitis are said to terminate favorably by resolution. Buel, in 1894, placed the mortality at 5 to 6 per cent., although he had collected 450 cases, with only 8 deaths. Deaver collected 200 cases with only 2 deaths.
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> Armstrong says that in the leading Montreal hospital, from 1853 to 1890, before operations were done—that is, in pre-operative days—the mortality was 23.8 per cent. He reports 517 cases, in which the average mortality was 12.8 per cent. Of

this number 389 were operated on, and 128 treated without operation. In this latter list the mortality was 3.12; of 319, 81 were interval cases, in which there was but 1 death; of 305 operated on in acute stages, 63 died.

*Relapsing Appendicitis.*—Dr. Kuemmel, of Hamburg, read a paper with this title, which was a review of 100 successful resections of the vermiform appendix. In addition to his own cases, the speaker had collected the statistics of a nearly equal number of cases of relapsing appendicitis in which the operation had been refused. In these cases the mortality after three years was greater than in the operated cases, while the morbidity consequent upon the recurring attacks made the second series of cases incomparably worse.

Dr. Sonneberg, of Berlin, reported 250 operative cases, exclusive of several of tuberculous disease of the appendix. There were 66 cases of simple and 128 of gangrenous appendicitis. In the 250 cases there were 43 deaths. This mortality of 17 per cent. represents the mortality of the disease, not of the attacks. The 43 deaths were encountered in cases of the perforative form of appendicitis, with complications, as lung and pleural affections, thrombosis, peritonitis, etc.

Kuemmel, of Hamburg, in his statistics mentions 51 cases of recurrent form, operated upon during the interval between attacks, with but 1 death. Samuel Lloyd reported 558 cases, of which 226 were operated upon, with 192 recoveries. In direct contrast to this, 265 cases were treated conservatively with only 60 recoveries.

Hawkins reports 264 cases which occurred at St. Thomas' Hospital, with 190 recoveries, making a mortality rate of nearly 27 per cent.; 59 of the cases had one or more previous attacks, of which 6 died, making a mortality rate of 10 per cent. under medical treatment.

Deaur (*Med. News*, Dec. 21, 1895) maintains emphatically that early operation is the only justifiable procedure. He has operated upon 200 cases, with only 2 deaths, and these in the first hundred.

Herman Kuemmel (*Berlin Klin. Woch.*, April 11, 1898) presents a clinical study of 104 cases of recurrent appendicitis in which operation was performed between attacks. There was not a death in this series.

Examination of the appendices which had been removed showed that in not one case had the organ become normal after the attack.

I have been able to collect 6500 cases, which I classified under the headings: Catarrhal, Suppurative, and Recurrent Appendicitis, of which 1400 were treated medically. Two hundred and fifty-two of these died, a mortality-rate of about 18 per cent. Of the remaining 5100, 987 were operable upon during the catarrhal stage. Fifty died, a mortality of 20 per cent. One thousand four hundred and eighty-three were cases of recurrent appendicitis, with 35 deaths, a mortality of 2.25 per cent. Many report series of 100 or 200 cases without a single death. This low mortality rate in recurrent appendicitis is due to the immunity to infection acquired by repeated irritation. It will be at once apparent to you that out of 5100 subjected to operation, 1483, or 29 per cent., were cases of recurrent form of the disease. As a last word, let us close with the following: Dr. W. W. Keen, of Philadelphia, in discussing appendicitis at the Denver meeting of the American Medical Association, concludes his remarks as follows: I protest against the use of opium in rare cases, as it has a tendency to mask the symptoms of the disease, and leads the patient to the grave. I protest against the argument of Dr. Niles, that every case ought to be operated upon, and the appendix is never to be left.

Out of 300 post-mortems on as many bodies, it was found that 100 of the individuals had had appendicitis at some time in their lives, and had all recovered from the disease. I challenge the assertion that through surgical operations all but 2 per cent. of cases can be saved. I challenge any operator in the room to take 100 well persons and operate on them without killing more than 2 per cent. We all fail, gentlemen. I do not know why, but we all fail. I do not believe in operating on all cases of appendicitis.

I would rather have a live man with an appendix, than a dead one without one. (Applause.) I do not believe with the witty Frenchman that no case is complete without a post-mortem. (Laughter.) If the patient is no worse after forty-eight hours of observation, let him alone: Let him get well.—*Western Medical Review.*

218 Central Avenue.

## MEDICINE AS A BUSINESS PROPOSITION.*

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CHICAGO.

So live that when thy time has come to join the innumerable caravan which moves to that mysterious bourne peopled by doctors who have died of innutrition, thou go not like the general practitioner called at night, scourged from his office, but, sustained and soothed by the motto "Never trust," approach thy grave like one who wraps his stocks and bonds about him and lies down to pleasant dreams.[1]

Some months since I had the honor of addressing a medical club of Chicago, composed of prominent general practitioners. I chose for my theme "The Business Aspect of Medicine." The resulting discussion was so animated, and the participants were so interested in the subject, that I promised to amplify and publish my remarks—a promise that for many and sufficient reasons I have hitherto been unable to keep.

That there are a number of points in this address on which many of my professional brethern will differ with me—possibly with some degree of warmth—I am well aware. Having, however, the material welfare of the profession at heart, and believing that the ventilation of truths—even unpleasant ones—is healthful in the end, I will proceed as though expecting only favorable criticism.

Lest the accusation of being Pharisaic be hurled at me, I will take this opportunity of admitting the somewhat obtrusive fact that in some directions I am part of the very machinery the operations of which I am about to criticise. It will hardly be asserted that what I have to say is a wail of distress—any grievances of my own that may be presented are merely illustrative, and being personal, are not hearsay evidence. A spirit of professional altruism, and not a desire to present a bill of little complaints that are out of harmony with self-evident personal results, is my incentive for this lecture. I have in mind the interests of the profession at large, and especially those of the rank and file, who, while they do not sound the cymbal so loudly as some of us college folk, yet constitute the bone and sinew of the profession. Should what is to follow prove somewhat peppery in spots, the mantle of charity should be thrown over what is, at worst, merely the personal equation of the pen.

### FINANCIAL REWARDS OF THE PRACTICE OF MEDICINE.

As a general proposition it is safe to assert that the practice of medicine from a business standpoint is a failure. The successful exceptions merely prove the rule. It is also safe to assume that the elements of financial non-success are cumulative in their action—a fact that is easily proved by hospital and dispensary statistics. The average income of the physician is less than that of the high-class artisan, the telegraph operator in an important office; and far less than that of the wide-awake commercial traveler. This, like many other points that will follow it, is threshing over old straw, but such threshing is unavoidable.

The practitioner of medicine, like every man who re-lies on his own hand and brain for a livelihood, is entitled to a bit of earth that he and his may call their own, at least a modest competence, and a well-earned rest when his sun begins to set and the twilight of his life approaches. How many doctors are in a position to enjoy or even render less awesome their twilight days? As city doctors are all supposed to be rich—at least by the public, that does all it can to prevent their becoming so—it would be interesting to know what proportion of them, even in metropolitan medical centers, own their own homes or have property investments. A far smaller proportion than is just, I fancy.

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*Lecture delivered at the public meeting of the St Joseph County Medical Society. South Bend, Ind., Jan. 30, 1900.

[1] With apologies to the shade of W. C. B.

The assertion has been made that the general poverty of the medical profession is due to a lack of appreciation and a contempt for the rights of the medical man on the part of the public at large. This, however, is a secondary matter which, being self-evident, overshadows the primary cause—the asinine stupidity of the profession itself. As a broad general proposition the reputable profession as a whole has about as much sense as the dodo, and, unless signs fail, will, sooner or later, meet the fate of that remarkable bird. How the profession can expect the respect and appreciation of the public when it has no respect or appreciation for itself is difficult of conjecture. The public can not be expected to keep clean the nest of the medical dodo. Furthermore, the public quite rationally values the stupid thing according to its self-appraisement.

Primarily, the practice of medicine is supposed to be founded on a mawkish, blanket-like sentiment of philanthropy, which is expected to cover both God's and the devil's patients—the pauper and the dead-beat—the honest man and the rascal—the rich and poor alike. The doctor is expected to wallow eye-deep in the milk of human kindness, scattering it broadcast for the benefit of humanity, but he is in nowise expected to even absorb a little of it, much less to swallow a gulp or two occasionally for his own benefit. By way of piling Pelion upon Ossa, the public, having discovered that the doctor sets litte value on his own services, proceeds to eye him with suspicion; the tradesman is very careful how he trusts doctors. Of course, the tradesman has his own family physician "hung up" for a goodly sum, but—knowing doctors to be poor business men—the tradesman often cheats them in both the quality and price of goods. It is a great and goodly game that plays from both ends and catches the victim in the middle. The tradesman has one redeeming feature, however; he does his best to teach his doctor patrons a lesson. He either sends his goods C. O. D. or, if the doctor be one of the favored ones, he finds the bill in his mail bright and early on the 1st of the month. I often think my tradesmen must sit up all night in order to get their bills in bright and early on the 1st. If not paid by the 15th, a collector is usually at the doctor's office to see about it. Yet the professional dodo—my apologies to the shade of the "sure enough" dodo—will not learn. He goes on and on, neglecting his accounts, mainly because he is afraid of offending his patrons and driving them off to some other doctor who isn't so particular; and the worst of it is, there are plenty of contemptible fellows who draw their own salaries promptly when due, or present their bills for goods with frantic haste, who consider a doctor's bill a flagrant insult. Will nothing ever inspire the doctor with courage enough to despise and ignore such contemptible trash? Does he prefer the rôle of a lickspittle to that of an independent and self-reliant man?

As illustrations of the value the profession sets on its skill and learning, the amount of gratuitous work done is striking. Our pauper—or pauperized—patrons are divided into several classes, viz: 1. The free hospital, clinic and dispensary class. This is on the increase. According to Dr. Frederick Holme Wiggin 51 per cent. of all cases of sickness in New York City are now classed medically as paupers, as against 1.5 per cent. twenty years ago! This is appalling. Of these alleged paupers it is safe to say that 75 per cent. are able to pay full or at least fairly good fees. Why should pauperism be shown so prominently in the matter of medical bills, as compared with other necessities of life? And why should the profesion carry a burden that belongs to the public? 2. Free patients of the private class: *a*, those who can pay but will not, i. e., dead-beats and swindlers; *b*. persons whose circumstances are such that the doctor feels in duty bound to render no bills; *c*, persons who presume upon social acquaintance with the doctor to "hold him up" for friendly, perhaps informal, consultations.

It requires no great mental effort to see the terrible load the profession is carrying—self-inflicted, and often for fallaciously selfish motives, it is true, but none the less heavy. The college and free hospital may be the professional "old man of the sea," but so much the worse for the medical Sindbad. Whatever the explanation, private practice is on a par with dispensary practice with regard to the impositions practiced on the doctor. It is safe to say that, of the sum-total of surgical and medical patients of all kinds and social conditions under treatment in Chicago at the present time, over one-half are paupers—honest or dishonest. Pay the doctor for the work involved in this wasted and misapplied charity, and the medical profession would plunge into a sea of prosperity that might swamp it. And it is not only the rank and file of the profession that suffers. Ye celebrated professor, reaching out for glory, yea, into infinite space, clutching frantically at everything in sight, no matter how profitless—providing the other fellow doesn't get the case—often defeats his own ends. And the great man dies, and is buried, and we take up a collection for his widow, to meet his funeral expenses, and sell his library—six feet of earth make all men of a size. *Sic transit gloria mundi.*

And when like dog he's had his day,
And his poor soul hath passed away,
Some friendly scribe in tearful mood,
Will tell the world how very good
The dear departed doctor was—
And thus win for himself applause.

### FALSE PRETENSES OF PROSPERITY.

One of the most potent causes of professional poverty is the mania of the doctor for a pretense of well-doing. He exhibits this in many ways. One of the most pernicious is an affectation of contempt for money. This it is that often impels him to delay the rendering of his accounts. Oftentimes his patient offers to pay all or part of his bill. With a lordly and opulent wave of his marasmic hand the doctor says, "Oh, that's all right; any time 'll do." And the triple-plated medical imbecile goes on his way with a dignified strut that ill befits the aching void in his epigastric region, and is decidedly out of harmony with the befringed extremities of his trousers. And then the doctor apologizes to himself on the ground of a philanthropy that is but the rankest and most asinine egotism *en masque.* When will the doctor understand that payment deferred maketh the patient dishonest? When will he consider the necessities of his wife and children as outweighing the feelings of the patient who owes him money? When be a man, and not a time-server and truckler to appearances? He would take the money did he not fear the patient might suspect that his doctor was not prosperous. He wishes the patient to think that the doctor and his family dine with the chameleons, or are fed by ravens. Yet the medical Elijah waiteth in vain for the manna-bearing birds—they know him for what he is, a counterfeit prophet who vainly yearns for the flesh-pots of Egypt—who has a ponderous and all-consuming desire for pabulum, and a microcephalic capacity for finance.

A large proportion of the profession in cities carries its false pretense of prosperity into all the affairs of life. An expensive establishment in a swell locality, a turnout that shall be the envy of all his competitors, the opera, social events galore, expensive dinners, subscriptions to this, that and the other thing in which he has, or should have, no concern—such is the system of blackmail that the doctor often allows to be levied on himself by that hydra-headed, brainless bugaboo termed "society." He submits to the blackmail because he is afraid society will think he is not prosperous unless he makes a splendid appearance, "and," he says to himself, apologetically, "they don't want a fellow who isn't prosperous, you know." A yearly trip to Europe or some swell resort comes in by way of trimming, and before our aspiring friend is done with his tribute to "sassiety," he finds that he has more than he can do to make ends meet. If he only had the spirit of a Vanderbilt, it would do him as good a turn as would quite a bit of that gentleman's money, for he would say "society be d—d," and forthwith stand on his own bottom.

The gilded show of prosperity reacts against the doctor's interests in the same way as his refusal to accept money—the patient, judging by externals, thinks the doctor doesn't need money, hence tardily, if ever, pays his bills.

One of the worst results of a pretense of opulence on the part of the doctor is the inducement it offers to foolish young men to enter the profession. Thinking that doctors make their money easily, and plenty of money at that, young fellows, often illy-adapted to medicine, are frequently induced to join the already over-crowded ranks of the profession.

Speaking further of catering to appearances, how often the struggling young doctor takes unto himself a partner in his poverty, by marrying. Society has an unwritten law that unmarried doctors are not *au fait*. The young doctor feels that way too—and there is usually a sweet girl somewhere who agrees with him—but he doesn't see how he is to support a wife. However, he yields to the pressure of social custom and—two miserable people stand where one stood before. How long will it be before the profession meets the prevalent social opinion on the marriage of doctors with the contempt it deserves? The doctor, of all men, should not marry until he is well over the breakers and into the sea of prosperity. Any other view is mere twaddle, and founded on mawkish sentimentality and a strabismic notion of propriety. The doctor should disregard the opinions of the old women of society—whether the old women be with or without trousers. Why should he be disturbed by the raucous ruminations of these "psychic humpbacks."

### LACK OF JUDGMENT OF HUMAN NATURE.

Doctors are supposed to be keen judges of human nature. I often think that this is absolutely without foundation. Defective knowledge in this direction is a very expensive luxury to the medical profession. The confidence-man and sharper can not fool the average doctor into buying a gold brick, perhaps, but they can come very near it. The oily-tongued and plausible man with a scheme finds the doctor his easiest prey. The doctor has often hard enough work to wring a few dollars out of his field of labor, and it might be supposed that it would be difficult to get those dollars away from him, but no, it's only too easy. He bites at every thing that comes along—he often rises to a bare hook. Mining stocks, irrigation and colonization schemes, expensive books that he doesn't want, will never need and couldn't find time to read if he would, histories of his town or state in which his biography and picture will appear for $100—proprietary medicine schemes, stock in publications of various kinds; he bites at everything going—he has *embonpoint cérébrale.* Oh, but the doctor is easy! I have very painful memories. The best investment I ever made was when I paid a fellow for painting a sign for the door of my consultation room, reading: "Notice—Persons with schemes will please keep out. I have some of my own to promote."

### COLLEGE, HOSPITAL AND DISPENSARY EVILS.

It is rather a delicate matter, perhaps, for a college professor to touch on the evils of medical colleges in their relation to the business aspect of medicine, but I shall nevertheless speak plainly and to the point. While theoretically the better class of medical colleges were founded solely for the advancement of science, it is none the less true that self-aggrandizement has been the pedestal on which most of our disinterested giants in the teaching arena have stood, and are standing. Remove the personal selfish interest of college teachers and most of our schools would be compelled to close for lack of instructors. Let us be honest with ourselves, please. Not that self-interest is reprehensible—I hold the contrary. One may teach for salary, reputation, the love of teaching, or a desire for self-improvement, it matters not, for if he be of the proper timber he is the right man in the right place. Self-interest makes better teachers on the average than philanthropy, providing the primal material is good.

Granting that self-interest is the mainspring of the college professor, is he very "long-headed" from a business standpoint? I submit the following propositions as proving that the average college professor defeats his own ends: 1. He devotes to teaching time and labor over and above the exigencies of ordinary practice which, if devoted to cultivating the good will of the laity, would be much more profitable. 2. While cultivating the acquaintance and friendship of the alumni of his own school—a few each year—he alienates from himself the friendship of every alumnus of every rival school, the instant he begins teaching. 3. He assists in educating and starting in life, young, active competitors to himself. 4. He is compelled to devote a large percentage of his time to the gratuitous relief of medical students and physicians. He may give his time cheerfully, but he yields up his nerve force just the same. 5. Most college professors are less successful in the long run than the more fortunate ones of the rank and file who have never aspired to teaching honors. 6. Greater demands are made on a professor's purse than if he were in the non-teaching ranks of medicine. He, more than all others, is expected to put up a prosperous appearance.

The college clinic—especially of the surgical sort—is far-reaching in its detrimental effects on professional prosperity. Few or no questions are asked, and the millionaire is being operated on daily, side by side with the pauper, free. And the blame does not always lie with the professor who runs the clinic. General practitioners bring patients to the free clinics every day, with full cognizance of their ability to pay well. Why doctors will persist in thus cheapening surgical art is difficult of conjecture—but they do it just the same.

Of course, the college clinic is supposed to be a theater of instruction. Often, however, it is but a stage on which comedy-dramas are enacted. A brilliant operation that nobody six feet away can see, and an operator bellowing at his audience like the traditional bull of Basham—in medical terms that confuse but do not enlighten, terms that are Greek to most of the listeners—this is the little comedy-drama that is enacted for students who have eyes but see not; who have ears but hear not. Instruction? Bah! Take the theatric elements, and the plays to the gallery, out of some college clinics and there wouldn't be a corporal's guard in attendance.

Worse than the free clinics are the so-called charitable hospitals. Much has been said of dispensary abuses, but few have had the courage to say anything in adverse criticism of these institutions. While nominally founded to fill "a long-felt want"—and the number of long-felt wants from the hospital standpoint is legion—these hospitals are founded on strictly business principles, save in this respect—the people who found them feed on their innate capacity to get *something for nothing.* The first thing the founders do is to get a staff of doctors to pull the hospital chestnuts out of the fire. The members of the staff think that the hospital is performing the same duty for them, and everything is serene. And so the surgeon goes on operating on twenty patients—fifteen of whom are able to pay him a fee—in the hope that one among them all is *willing* to pay him a fee. Exaggeration? Well, I can not swear to the accuracy of the foregoing, but an eastern surgeon of world-wide fame once told me that for every patient who paid him a fee he operated on nineteen for nothing; and this man has no public clinic, either. Is it conceivable that the nineteen free patients are all paupers? Many of them go to my friend for operation, from very long distances. Ought the railroads and hospitals to have all the profits? Have we not all had similar experiences in a lesser degree? With the development of charitable hospitals far in excess of any legitimate demand, it has come to pass that surgery is almost a thing unknown in general city practice. Even the minor operations have left the general practitioner—to return no more so long as there are free hospitals and dispensaries. Where is the emergency surgery, of which in former days every practitioner had his share? Railroaded off to the "charity" hospitals to be cared for gratis.

In a recent conversation with a practitioner of thirty years' experience, I said, "Doctor, you used to do a great deal of general surgery throughout this section of the city. Have the hospitals affected your practice in that direction to any extent?" He replied, "Surgery with me is a thing of the past. Even emergency cases are carted off to the nearest hospital. If by chance one does fall into my hands, it is taken away from me as soon as I have done the 'first-aid' work." Personally I see very little use in teaching surgery to the majority of students who intend to practice in our large cities—they will have little use for surgical knowledge.

Here are three cases in illustration of the way our "charitable" hospitals antagonize the business interests of the profession:

1. A very wealthy farmer engaged me to perform an exceedingly important operation. It was understood that $1000 was to be the honorarium. He was afterwards advised to go to a certain "religious" hospital where he was operated on by an eminent surgeon who received nothing for his services. The patient paid $15 a week for hospital accommodation, and $25 a day to his family physician, who remained with him "for company." What a harmonious understanding between the patient and his family doctor—and what a "soft mark" that surgeon was. I had the pleasure of telling the latter of the gold mine he didn't find, some time later, and the shock to his system amply revenged the body surgical.

2. A patient who was under my care for some weeks and paid me an excellent fee, finally divulged the fact that he had meanwhile been living at a certain hospital as an "out patient," at an expense of $8 a week. He had become dissatisfied with the hospital attention, he said, and, pretending great improvement, was permitted to get about out-of-doors.

3. A man on whom I operated and who paid me my full fee without argument or question, came to me directly from one of our large hospitals, where he had been sojourning for several months. That medical men in hospitals are imposed on is a trite observation. So long, however, as it appears to be the doctor's advantage to be on a hospital staff, plenty of men will be found who will be glad of the chance. As for the injury which the system inflicts on the profession at large, that is no argument with the individual. Human nature operates here as elsewhere. Knowing that the system is bad, we are all anxious to become victims.

In recommending the payment of salaries to hospital men, a recent editorial[2] claimed that such a plan will remedy all the evils incident to the professional side of hospital management. I do not agree in the opinion that the payment of salaries to the staffs of institutions for the care of the sick will alone correct the evils of such institutions. The writer of the aforesaid editorial is incorrect, also, when he says that an awakening is at hand. No, not at hand; it is coming though; the handwriting is on the wall. When the revolution does come, this is what will happen: 1. Hospital physicians and surgeons will be paid salaries. 2. Hospitals will take as free patients or patients who pay the hospital alone only such persons as rigid investigation has shown to be indigent. All others will be compelled to pay their medical attendants just as in private practice. 3. Certificates of indigency will be required of every free patient, such certificate being signed by the patient's attending physician—outside of the hospital—and at least two other persons in the community where he or she resides. 4. General and especially country practitioners will cease to deceive hospital doctors as to the circumstances of their patients. One medical man should not impose on another.

Too much trouble, eh? Well, my friends of the hospital and dispensary—for the same charges should apply to the latter—you must either take your medicine or the revolution will go farther and this is what will happen: The profession at large will boycott every man who runs a college clinic, and every hospital and dispensary man. It will fight colleges and hospitals to the bitter end.

The day is perhaps not far distant when doctors outside of colleges and hospitals will run their private practices on the co-operative plan, thus dealing a deathblow to the free clinic and dispensary. Every man of prominence will have his own private clinic and advertise it among his patients. What is fair for twenty or thirty men is fair and ethical for one. Each man can have his own hours for the poor; he can eliminate the unworthy ones and, best of all, he can refer all his dead-beat patients to his clinic. Pride may bring fees from patients to whom honesty is a thing unknown. The private hospital will run most of the public hospitals off the earth. There will be no room for anything but municipal hospitals run squarely and fairly for charity, and reputable private hospitals run frankly for pecuniary profit, in which the operation and the attendance fees are the chief factors. Such hospitals will benefit, not hurt, the profession. In passing, I wish to remark that the general practitioner will probably some day cease sending cases to men who make a specialty of diseases of the head, trunk and extremities. The surgeon who to-day grabs an operation case brought to him by the general practitioner, and attends a case of labor in the latter's neighborhood to-morrow, is not just the man to be trusted, yet there are many such—men who persistently decline to "render unto Cæsar, those things which are Cæsar's."

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[2] Cleveland Jour. Med., Sept. 15, 1898.

### MEDICAL "TIN-GODS."

One of the most vital flaws in the business sense of the general practitioner is his penchant for hero worship. He hears of the medical tin god from afar, and burns incense on the altar of his greatness. The great man pats the humble doctor on the back, calls him a good boy, and tells him just where to take all his cases. Sometimes he offers to divide fees with him.

The medical tin god is truly a "self-made man in love with his maker." He has "genius stamped upon his brow—writ there by himself." His evolution is interesting. It is history repeating itself: Apsethus the Libyan wished to become a god. Despairing of doing so, he did the next best thing—he made people believe he was a god. He captured a large number of parrots in the Libyan forests, and confined them in cages. Day after day he taught them to repeat, "Apsethus the Libyan is a god," over and over again. The parrots' lesson learned, Apsethus set them free. They flew far away, even into Greece. And people coming to view the strange birds, heard them say, "Apsethus, the Libyan, is a god; Apsethus, the Libyan, is a god." And the people cried "Apsethus, the Libyan, is a god; let us worship Apsethus, the Libyan." Thus was founded the first post-graduate school.

The medical Apsethus and the deluded parrots of the medical rank and file are here, and here to stay, until both are starved out. And the modest general practitioner looks up to the medical tin god and wonders "upon what meat does this our Cæsar feed that he hath grown so great?" The meat of industry? Perhaps. The meat of prodigious cerebral development? Seldom. The meat of opportunity? Yea, yea, my struggling brother, "and the devil take the hindmost." But, more than all, he hath fed on the meat that the parrots have brought him—Elijah's ravens were not a circumstance to those parrots. "In the kingdom of the blind, the one-eyed man is king." How long will the general practitioner continue to play parrot to the medical tin god of the charitable hospital, the very existence of which is a menace to the best interests of the profession—the profession for which the institution has no charity? In that happy time to be, there will be no tin gods. There will be a more equable division of work, and every prosperous community will have its up-to-date private hospitals with up-to-date men at the head of them. As for the post-graduate teacher—good or bad—he is already defeating his own ends—he is exciting ambitions in the breasts of his pupils. Here and there among them is an embryo McDowell, a Sims, or a Battey. The backwoods' country produces good rich blood and virile brains. And the Sims, and McDowells, and Batteys of the future will be found in relatively small places, doing good work, and then—good-bye to the tin god and his horn, "for whosoever bloweth not his own horn, the same shall not be blown." And in that day the parrot shall evolve into an eagle, and the hawk had best have an eye to windward. Meanwhile, hurrah for the post-graduate school and its pupils, and more power to the tin gods.

### SUPERABUNDANCE OF MEDICAL COLLEGES.

This business handicap is so self-evident that it is hardly necessary to touch on it. We raise the standard of medical education year by year, yet the mushroom colleges do not go—they are here to stay. If one-half the colleges were wiped out of existence, there would still be more than enough to supply the demand for physicians. We have done the best we could to breed competition by manufacturing doctors, and we are doing all we can to make that competition first-class—a queer business proposition in force of the oversupply of doctors. We are unjust, too, to the men we educate, by offering them inducements to enter an already overcrowded profession—but as long as human nature is as it is, I see no way out of the dilemma. This much is to be said of the medical profession, viz., no other profession has had such obstacles thrown in its upward path to a higher education as ours. It is easier for a college of "osteopathy," "vitopathy," "Christian Science" or any other quackpathy to get recognized by state legislatures than it is for regular medicine to get a hearing even on matters pertaining to public health. We are not business-like, and the public is not with us. We do not buy legislation and, I hope, never will; so the lawmakers are not with us.

### INCONSISTENCIES AND ABSURDITIES OF ETHICS.

There was once a time when it appeared a goodly thing for the chosen few to get together like the "three tailors of Tooley street," and, after establishing to their own satisfaction the fact that they were indeed "the people," formulate rules for the guidance of the many. These rules were called "ethics." And the profession has been wrestling with its ethics ever since, trying to determine what it was all about, anyhow. The ethical garment of half a century ago no longer fits—it is frayed and fringed, and baggy at the knees; full many a patch has been sewed on it, in individual attempts to make it fit from year to year, until it is now, like the Irishman's hat, respectable by age and sentimental association only. And the public, the ever practical and heartless public, has also wondered what 'twas all about, and exhibits little sympathy for a profession which, while driveling of ethics, has "strained at gnats and swallowed camels." Who does not remember when all the wiseacres with number eighteen collars and number five hats, seriously discussed the relative propriety of "Specialty" vs. Practice Limited," on professional cards? How times have changed. And then came the discussion by a learned society, of the ethical relations of "Oculist and Aurist" to "Practice Limited to Diseases of the Eye and Ear." And it was decided that men who had the former on their cards were not ethical and could not enter that society. Ye Gods! Is the fool-killer always on a vacation? Must we always see those long ears waving over the top of the ethical fence, built by the fat hogs to keep all the little pigs out of the clover patch? What is the public to think of a profession that winks its other eye at the man who prints on his cards "Diseases of Women Only," but rolls up its eyes like a dying rabbit at the sight of a card reading "Diseases of Men Only?" What has raised the woman with leucorrhea to a more exalted plane than that occupied by a man with prostatorrhea, does not appear. Why so many inconsistencies, and why such hypocrisy! Sir Astley Cooper had his own private "hours for the poor." Our European brethren print their college and hospital positions and all their titles on their cards. Are they less ethical than we? Homeopathy is a dead duck over there, and quackery has a hard row to hoe in Europe—queer, isn't it?

Our system of ethics has not only been hypocritic, but somewhat confusing. The young man on the threshold of medicine doesn't know "where he is at." He is confronted by the unwritten law that only celebrated men and quacks may advertise. Small fry, who haven't the ear of the newspapers nor a chance for a college position, are tacitly ordered to keep their hands off. And the young fellow watches the career of the big man, who hides every other man's light under his own bushel, and marvels much. Especially does he marvel at the accurate photographs, life histories and clinical reports of his more fortunate confrères that appear in the newspapers without their knowledge. Experiences differ. I haven't yet got around to newspaper clinical reports, but it has been my fortune to be "written up" on several occasions. I do not recall that the newspapers drew on their imaginations for my photograph. I wish I might think so, and that their imaginations were distorted—the result was so uncomplimentary. So far as I can learn, nobody protests against being legitimately represented in the newspapers. Why not be honest about it? The hypocrisy of some men is sickening. Paying clandestinely for newspaper write-ups is despicable, yet some of the very men who protest that they "really don't see how that could have gotten into the papers" have paid for the advertising in good "coin of the realm." It is queer that the newspapers should write up the most minute details of the wonderful exploits of some poor fellows, together with their family histories, and publish their photographs, without their knowledge or consent—especially queer when we read in conclusion that "Professor John Doe is the greatest surgeon that ever lived." Why not come out and acknowledge that these are paid for? This would give an equal chance to all, and especially to young fellows who have money enough to pay for similar things. He who has not the price should not find fault with the fellow who has, for, "business is business." Meanwhile my young friends, remember that "big mountains may do what little mountains may not do."

When Koch's tuberculin was yet new, soon after it escaped, half-fledged, from the laboratory, only to be captured and made to perform like a trick monkey for the benefit of the laity, there came a ring at the "phone" of a prominent daily paper: "Hello, is that the *Daily Bazoo?*" "Huh, huh, it are." "Well, I'm Dr. Squirtem Galls. I wish you would send a reporter over here at once. I want to be interviewed on Koch's tuberculin." It is said that $25 changed hands, but I don't believe it. The gentleman would never advertise—at that rate—"no sir-ree." My informant was once the sporting editor of the *War Cry,* and hence unworthy of credence.

And what wonderful contributions the newspaper-great-men are making to science! The daily paper is the place to study appendicitis and things. It is not long since I learned from a distinguished surgeon friend of mine, via a daily paper, that evidence of a blow having been received on the head is an imperative indication for craniectomy, whether symptoms are present or not.

In preference to the clandestine methods now in vogue, would it not be better for men of authority to write signed articles for the newspapers and intelligently present medical matter to the public. But that wouldn't be ethical, would it? Such topics as "Advice to Young Men," "Letters to Young Wives," and "How to Keep Healthy," must be left to the quacks. We will confine ourselves to the surreptitious blowing of surgical horns and never mind the false notes. Meanwhile, let us stand back and watch the procession of modest men who never advertise—oh, no! At the head, with haughty mien, comes Professor Keene Carver, preceded by a herald in blood-red garb, blowing a large brass horn. Then comes the "bearded lady," whose blonde and breezy whiskers so delight the hearts of his swell society *clientèle.* He's a homeopath; you can depend on it. And here comes Rip Van Winkle—a middle-of-the-road "eclectic," gathering up his long and weedy beard to keep it from getting tangled up in the scientific barbed wire fence along the route. And here comes another sure-enough "regular," evidently a medicine man—so rare now-a-days. He is riding in a swell turnout and is on his way to his clinic. How do I know that Professor Windy Bowels is a regular? Because the gentleman who is riding beside him to his clinic is a reporter on the Chicago *Daily Jib-boom.*

I presume that the suggestion that I have made of the advisability of taking the public frankly into our confidence and giving it accurate information so far as its comprehension goes by signed articles in preference to clandestine advertising and the promulgation of fallacious ideas of medicine and surgery, will meet with bitter opposition. I nevertheless believe that a better education of the public is the only way to down quackery. The opposition will come chiefly from the surreptitious advertiser, who sees a prospect of other men getting the advertisement that he believes to be his proprietary right. Then there is the tribe of the Microcephali. The howl of protest will be long and loud from the pews occupied by these far-famed champions of medical orthodoxy. "We wouldn't put *our* discoveries or contributions in the newspapers—not ever." And gazing at their lemur-like front elevations we can well believe that they would have no trouble in establishing a "halibi."

Apropos of "discoveries," it may as well be understood that the public is bound to get the details of them sooner or later, and, when the time is ripe, the matter should be presented to it in a clear and intelligible form—comprehensible to the layman. The time is never ripe until the medical profession has weighed the discovery in the balance and rendered its final verdict on its merits. Taking the public into our confidence prematurely is bad business, and has always proved a boomerang.

*(To be continued.)*

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Care of Consumptives.—Among the good things said at the last meeting of the Medical Society of the State of New York, one of the best came from Dr. John H. Pryor of Buffalo, who illuminated the economic aspect of state care of consumptives in these words: "What we ask for is that the consumptive shall be taken care of at the right place and at the right time until he is well, and not at the wrong place and at the wrong time until he is dead." It is merely a question of whether we shall pay early or late. The consumptive is a public charge. We can admit the obligation early and make terms, or we can postpone payment until judgment by default is entered, covering every item of the account.—*Md. Med. Jour.*

# ARGUMENT AGAINST SENATE BILL 34, FIFTY-SIXTH CONGRESS, FIRST SESSION, GENERALLY KNOWN AS THE "ANTIVIVISECTION BILL."

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*(Continued from page 1244.)*

Who are to be subjected to the visits and inspection of these officials? It can be confidently asserted that the inspection will be practically limited to laboratories under the supervision of scientific men of established reputation, who have been selected by universities, medical colleges and heads of government departments for their recognized skill and knowledge. Dr. Bowditch has told you that he knows of no private vivisections by students, and I can say the same. Vivisection by physicians in their homes is very uncommon. The men who, as your chairman said on a previous occasion, do not need legal enactments are precisely the ones who are to be subjected to the annoyances of this system of inspection and in general to the vexatious restrictions of this bill, while, if the class of persons for whom this bill is said to have been framed really exist and now keep effectually concealed without any apparent motive, I do not see how this law is likely to reach them after their detection will lead to the infliction of a severe penalty.

Not only are the inspectors to make reports of the results of their observations which shall be published by the President of the United States, but "the Commissioners of the District shall direct every person performing experiments under this Act to make reports to them on the first day of January and July of each year, of the methods employed, the number and species of animals used, and the results of their experiments, in such form and with such further details as the said Commissioners may require: Provided only, That reports of any series of experiments alleged to be incomplete may be postponed by permission of said Commissioners for a period not exceeding six months. All such reports shall be published." (Sec. 5.)

Inasmuch as the new bill begins, after the enacting clause, with these words: "That hereafter no person shall perform on a living animal any experiment calculated to give pain to such animal, except subject to the restrictions hereinafter prescribed," it would appear that this latter provision regarding reports of experiments and their publication applies to experiments on invertebrates as well as vertebrates, for I know of no reason to suppose that an invertebrate may not suffer pain.

The period of six months allowed for the completion of experimental researches before the necessity of furnishing for publication reports thereon in whatever form and detail the commissioners require is so short that an experimenter will often be subjected to the hardship of either closing an investigation without satisfactorily completing it or of submitting to the outrage of having methods and results of half finished investigations spread before the public. It must be difficult for those unfamiliar with the conditions of scientific inquiry to fully appreciate these hardships. This requirement can not fail to injure the quality of scientific work and there are many useful investigations which would probably not be undertaken at all under such vexatious conditions. It is to be noted that in the previous bill the demand for reports on experiments was left to the discretion of the commissioners, whereas now these reports must be sent in at stated times and not in such form and with such details as the experimenter may wish, but in any form and with any details which the commissioners may require. Here, as with so many other provisions of this bill, the law can be so administered as to harass experimenters almost beyond endurance.

Those unacquainted with the real purposes and the methods of antivivisectionists would probably not anticipate one of the uses to which can be put the official records of licenses and certificates and the reports of experiments, but it is interesting to note that Sir John Simon, the most eminent of English sanitarians, formerly medical officer of Her Majesty's Privy Council, in his testimony in 1875, before the Royal Commission on Vivisection, clearly predicted this use or rather abuse. In replying to questions as to his opinion of a law embodying this system of licenses, inspection and official returns of experiments, he said (Report of the Royal Commission, etc., p. 77, London, 1876): "I think it would not be a security for animals, and I think it would give facilities for the persecution of physiologists. I think that physiologists under law of this sort would in these days run some risk of being treated as Vesalius was three centuries ago. . . . I should be very unwilling, I confess, to see physiologists put in a position in which those who are now making clamour on these subjects should be able to hold them up individually to popular odium; and under this clause" (i.e., that relating to official returns of experiments) "that could be done." I have here the second edition of a book entitled "The British Vivisectors' Directory; A Black Book for the United Kingdom," By Benjamin Bryan, with a Preface by Frances Power Cobbe, London, 1890. One sentence from Miss Cobbe's preface will serve to indicate that a main purpose of this book is to blacklist experimenters. In speaking of experimenters on animals she says: "Could the older non-scientific men and the tender-hearted women with whom they associate behold for one moment in some magic mirror, their employment of a few hours before over their torture troughs, they would be shunned and abhorred as unfit to belong to civilized society." The book is accompanied with comments full of misrepresentations and sometimes with gross misstatements of facts.[1] It is for you to consider whether you will place in the hands of antivivisectionists the opportunity to issue such appeals as this to elderly non-scientific men and tender-hearted women to ostracize a list of physiologists, whose names and experiments appear, accompanied by false and misleading statements, in a printed catalogue. It matters not that the list of names is in fact a roll of honor.

I desire to call attention, with especial emphasis, to a question about which more diversity of opinion has been expressed than concerning any other aspect of this bill. Will this bill, if it becomes law, prohibit important and useful experiments? Its advocates are vehement in their assertion that it is simply "restrictive and not prohibitive" and "concedes everything of utility," and they charge its opponents, who claim that the bill prohibits useful experiments, with misrepresentation or with ignorance of its provisions. The bill has been printed repeatedly in medical journals of this country, and has been fully discussed there. The accusation is unwarranted that protests against its enactment, which have been sent in hundreds to senators and representatives in Congress, by medical and scientific men and societies, are based on ignorance of the contents of the bill. There can be no doubt as to which side is the more competent to give a correct response to this question, the great body of medical and scientific men who answer it affirmatively, or those practically unfamiliar with animal experimentation and with physiology and medicine, who represent the negative.

I have already pointed out that this bill leaves it entirely to the discretion of two laymen, who constitute the majority of the District Commissioners, and who can not be shown to possess any special qualifications to judge of the matter, to determine whether any experiments on warm-blooded animals shall be performed in the District of Columbia. I need not recur here to the partial exemption of officers of the Government from the control of the District Commissioners. I have also shown how the numerous restrictions, such as the quadruply endorsed applications, the licenses, the registrations of places, the inspections, the requirement at stated periods of reports of methods, number and species of animals used, and results, the specifications as to purposes and conduct of experiments, place it entirely within the power of the administrators of the law seriously to hamper, and indeed actually to prevent, experimental investigations while nominally permitting them.

But aside from these prohibitive effects dependent on the manner of enforcement of the law, this bill in unmistakable terms expressly prohibits many important and useful experiments. The carelessness of construction and the vagueness, whether accidental or intentional, of certain provisions of the bill leave it uncertain whether some other useful experiments are forbidden or not.

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[1] An illustration of the way in which antivivisectionists misrepresent facts is furnished by a book entitled "The Nine Circles," which has the name of Miss Cobbe on its title-page, and for which she wrote the preface. At the Church Congress at Folkstone, October, 1892, Mr. Horsely called attention to this book in the following words: "In the book, all the experiments are grouped by Miss Cobbe as English and Foreign, respectively. I have taken the trouble to collect, from this gospel of Bishop Barry and Canon Wilberforce, all the experiments in which cutting operations are described as having been performed by English scientists, and in which I knew anesthetics to have been employed. These experiments are twenty-six in number. In all of them, chloroform, ether, or other anesthetic agent, was employed. But of these twenty-six cases, Miss Cobbe does not mention this fact at all in twenty, and only states it without qualification in two out of the remaining six. When we inquire into the twenty omissions in the twenty-six cases, we find in the original that again and again Miss Cobbe has, in making her extracts, had directly under her eyes the words 'chloroform,' 'ether,' 'etherized,' 'chloroformed' 'anesthetized,' during every experiment the animal has been deeply under an anesthetic,' and so forth." (*The Standard*, London, Oct. 7, 1892). Miss Cobbe subsequently explained that the book was "planned and compiled by her direction," but the actual work of compilation was done by another.

The only experiments on warm-blooded animals permitted by this act are those for "the advancement of physiological knowledge or of knowledge which will be useful for saving or prolonging life or alleviating suffering" or for "the acquirement of surgical experience likely to be of use in operations upon human beings" (Section 2, *a*), in which experiments "the animal must, during the whole of the experiment, be completely under the influence of ether or chloroform (or any other recognized anesthetic)," (Section 2, *c*). There are six, and only six; *exceptions to these requirements, to-wit:* 1. "Experiments may be performed under the foregoing provisions as to the use of anesthetics by a person giving illustrations of lectures in medical schools or colleges, on a certificate being given, such as is required for a license as hereinafter provided in section seven, to the effect that the proposed experiments are absolutely necssary for the due instruction of the persons to whom such lectures are given, with a view to their acquiring knowledge or experience which will be useful to them for saving or prolonging life or alleviating suffering;" 2, "in so-called inoculation experiments or 3, tests of drugs or medicines, or 4, foods, or 5, in experiments relating to the communicability of disease, the animal need not be anesthetized nor killed afterwards, nor 6, in tests of surgical procedure need animals be kept completely anesthetized during the process of recovery from the surgical operation." (Section 2, *c.*)

I can not claim familiarity with all of the antivivisection bills which have been introduced into legislative bodies. I know that many are very curious productions, but I should be surprised to learn that there are any, *stopping short of total* prohibition, which have been more prohibitive in their provisions than this so-called "moderate and reasonable" bill before us. Who was it that, in copying the phrases of this bill from the British act, struck out bodily the three provisions in the latter, absolutely essential for the continuance of experimental work in its legitimate scope, granting permission, when the necessities of the investigations demanded: 1, for the performance of experiments without anesthetics; 2, for the survival of the animal after the operative part of the experiment, and 3, for the performance of experiments "for the purpose of testing a particular former discovery alleged to have been made?" Was it some one who tells us that this bill "goes to the farthest extreme of concession in the anxiety of its framers to yield to the wishes of scientific men so far as may be consistent with the principle of legal supervision?" Does anybody suppose that the exceptions concerning inoculation experiments, tests of drugs, medicines, or foods, experiments relating to the communicability of disease, and tests of surgical procedure can begin to take the place of all the experiments forbidden by the omission of the provisions mentioned? Misapprehension there may have been as to the effects of this bill, but it has not been on the side of those who have emphasized its prohibitive features.

I could spend the entire time allotted to me in enumerating useful experiments absolutely prohibited by this bill, but it must suffice to call attention to a few of the more important classes of prohibited experiments.

No scientific man who reads this bill and notes the definitions of the purposes for which experiments are permitted and the enumeration of the few kinds of experiments excepted from certain prohibitions can fail to be impressed with the fact that the whole emphasis is laid on immediate practical utility. The framers of the bill had evidently no broader conception of science than that short-sighted Philistine one which sees no value in scientific discoveries unless they be of immediate practical application. They seem not to know that the foundations of applied science rest on discoveries in pure science made without thought of direct practical utility. Experiments made solely with a view of advancing physiologic and pathologic knowledge without immediate reference to their practical applications are precisely the ones which have yielded the richest harvest of results applicable to the diagnosis and treatment of disease. Such was the history of the discoveries of antitoxin, of the principles of antiseptic surgery, of the treatment of myxedema and cretinism by thyroid extracts, and of many other therapeutic and diagnostic procedures based on the results of animal experimentation.

Instead of some simple and comprehensive definition of the purposes for which experiments can be made, such as "for advancement of medical and biological knowledge and promotion of the healing art," we find the clumsy, unsatisfactory and vague phraseology already cited from Section 2, *a*. The only instance in the entire bill of the recognition of any other immediate purpose of experimentation than one relating to the treatment of disease is the permission granted in this paragraph to perform experiments "with a view to the advancement of physiological knowledge." The latest bill has even removed the word "physiological," found in all the previous bills, for the designation of one of the kinds of knowledge for the acquirement of which by students demonstrative experiments may be made in illustration of lectures. It is not customary to designate by the epithet "physiological" the kind of knowledge sought for in pathologic and bacteriologic experiments, and nevertheless, by no means all of these experiments are made for the purpose of acquiring knowledge directly "useful for saving or prolonging life or alleviating suffering." There is a science of pathology as well as of physiology. Together they make the foundation of scientific medicine. Each is most surely advanced by its cultivation for its own sake. The ultimate purpose of obtaining knowledge useful to practicing physicians and surgeons is far more likely to be secured by the experimental work of those experts who devote themselves to physiology and pathology as sciences than by experiments made with direct reference to their application to the treatment of disease. It is difficult to say whether the term "physiological" will be interpreted by the administrators of the proposed law in some broad unusual sense so as to include all pathologic, bacteriologic, hygienic and chemical experiments not performed for the immediate purpose of advancing knowledge "useful for saving or prolonging life or alleviating suffering." Certainly no such vagueness and doubt as to the interpretation of the law should have been permitted as regards these important classes of experiments.

The bill provides that the animal must be completely anesthetized during the whole of the experiments and, if the pain is likely to continue or any serious injury has been inflicted, must be killed before recovery from the influence of the anesthetic. (Section 2 *c.*) The previous bills contained the ridiculous requirement that only ether and chloroform could be used as anesthetics, whereas in the last bill permission is parenthetically granted to use "any other recognized anesthetic." Those acquainted with antivivisectionist writings must have observed the absurd notions contained therein regarding the distinction between anesthetics and narcotics, so far as the production of insensibility to pain is concerned. It is there stated that such narcotics as morphia and chloral, which on account of their prolonged narcotic effects are often useful and most merciful in animal experiments, do not even in large doses render animals insensible to pain. The so-called narcotics are administered to animals in doses relatively much larger than for human beings and in ways securing prompter effects, but to the antivivisectionist none of these is a "recognized anesthetic." I apprehend that the present phraseology of this bill is calculated to leave it to the decision of the Commissioners of the District of Columbia whether the use of certain narcotic substances, although in fact capable of producing insensibility to pain, shall be permitted in animal experimentation. Doubtless the judgment of this tribunal on this question will be eagerly awaited by the medical world. Anesthetics and narcotics differ among themselves in their effects on the circulation, respiration and other functions, and, while ether and chloroform are the most generally useful, the exigencies of a research may require the employment now of one and now of another without introducing any difference in the completeness of the insensibility to pain.

The use of curare as an anesthetic is forbidden by this bill. Curare is not in fact used as an anesthetic by physiologists, but it hardly seems necessary for Congress to pronounce on the question of its anesthetic properties. Bernard, who believed that curare does not produce insensibility to pain and whose theatrical description on this subject is extensively quoted in antivivisectionist literature, correctly stated, in the following words, the only way in which this question can be decided: "Man alone, after recovering from poisoning by curare, could tell, supposing that he preserved his memory, whether or not he had suffered." Since Bernard's experiments, over forty years ago, other experiments have been made, some of which show that curare in the doses used in the laboratory acts on the sensory as well as the motor nerves, and, what is most pertinent to the question. there have been instances reported of the accidental poisoning of men by curare, who recovered and in whom sensation was totally abolished, while the action of the drug was apparent. (Stephen Paget: Experiments on Animals, pp. 243-245. London, 1900.)

There are painful experiments, fortunately very exceptional ones, in which the objects of the experiment would be frustrated by the use of an anesthetic. Such experiments are permitted under certificates by the British law, but are prohibited by this bill—excepting inoculation experiments, tests of drugs, medicines or foods, and experiments relating to the communicability of disease. When one considers that the discovery of the separate functions of the spinal nerve roots, probably the most fundamental discovery in physiology next to that of the circulation of the blood, is based on experiments under this category, the possible injury to science which may result from the absolute prohibition of this class of experiments is sufficiently apparent.

Perhaps the largest and most important class of useful experiments prohibited by this bill comprises those in which the purposes of the investigation require the survival of the animal for periods of time too long for the practicable continuance of the anesthesia. Nothing in this bill is more curious or more characteristic of the ignorance of its framers in scientific and medical matters than the little list of cases in which it is permitted to dispense with an anesthetic or to allow the animal to recover from the influence of the anesthetic before killing it. To the three exceptions which permit the survival of the animal, enumerated in previous bills, the present bill has added "tests of foods" and "experiments relating to the communicability of disease." The expression, "tests of drugs, medicines or foods," is certainly a very peculiar and, at least to members of the regular profession, unfamiliar designation of investigations in pharmacology and nutrition. It is hard to see why "tests" of other therapeutic procedures than those of drugs, medicines and foods should be excluded from this list, but I suppose that we ought to be grateful for this new concession that animals need not be anesthetized or immediately killed while feeding them during these "tests of foods."

It is difficult to see what of importance is added to this meager list by the insertion, in the new bill, of "experiments relating to the communicability of disease." A communicable disease is of course a contagious disease, and there do not occur to me any important experiments relating to its communicability which do not come under the already permitted class of "inoculation experiments." But if experiments permitting the survival of the animal may be made with reference to the "communicability of disease" why in the name of common sense may they not be made with reference to the study of the causation, the diagnosis, the prognosis, the pathology of disease?

It will be noticed that this singular little group of experiments which constitute the only ones in which the animal is permitted to survive the influence of the anesthetic are all experiments supposed to be of immediate practical utility, although they represent only a very small fraction of such experiments, most of which have just as much claim to be included as those which actually appear in the list. I have already indicated the fundamental error of conception, nowhere, in this remarkable bill, more strikingly manifested than here, which attributes supreme importance to experiments conducted with a view to their immediate, practical application to the treatment of disease.

With the five exceptions—inoculation experiments, test of drugs or medicines, tests of foods, tests of surgical procedure, experiments relating to the communicability of disease—all physiologic and pathologic experiments in which the ends of the experiment can be attained only by observation of the animal for days or weeks are prohibited by this bill. Such important experiments as those which have shed light on the processes of digestion by gastric, biliary, pancreatic or intestinal fistula, on the functions and sounds of the heart by the experimental production of valvular lesions, on the functions of the brain and spinal cord, of the kidneys, of the thyroid gland, of the liver and, indeed, of most of the organs of the body by observations extending over some length of time after an experiment, are all prohibited by the conditions of experimentation imposed by this bill. The list of prohibited experiments of this class is so long that I can not attempt to enumerate them. It has been asked whether the experiments on the brain and on the liver, cited by Dr. Keen as the basis for his successful operations, could not be performed under the provisions of this bill. They could not, for they required the survival of the animal after an operation inflicting serious injury, and they were not undertaken as tests of a surgical procedure or with reference to the communicability of disease, but for purely physiologic and pathologic purposes. Nor does this bill permit such experiments as those cited by Dr. Hare, which have led to the successful treatment of myxedema and forms of cretinism. If this bill included no more than the provision forbidding the performance of this class of experiments its enactment would inflict a blow, simply brutal, on biologic and medical science. It is conceivable that the framers of the bill did not know what they were doing when they inserted this prohibitive feature, but that surely does not put the matter in any better light.

It does not seem to me necessary, nor in the limited time is it practicable, to continue with an enumeration of all the useful classes of experiments prohibited by this bill. To some others I have called attention in Senate Document No. 104, 55th Congress, Second Session, but no one has ever attempted anything approaching a complete list of the prohibited experiments. I may here say that it is not clear to me what is meant by the assertion repeatedly made by advocates of the bill, that inoculation experiments are excluded from its operation. They are subject just as much as any other experiments to all its restrictions except that the animal need not be anesthetized during the operation or killed afterward. The magnitude of the concession that an animal—a mouse is the one oftenest used—need not be anesthetized for the prick of a needle or kept unconscious for days or weeks seems to have made an extraordinary impression on the supporters of this bill. Enough has been said to demonstrate that this bill explicitly prohibits many experiments of the highest scientific and practical value, including many which involve less suffering to the animal than some that are permitted. These unambiguous prohibitive features of the bill have been pointed out again and again in published documents but I have never seen any answer vouchsafed to these apparently weighty criticisms, nor do I expect to hear any to-day.

One of the speakers on the other side devoted a large part of his remarks to the subject of vivisection in public schools. The only reply which seems necessary is that the existing law permits only "properly conducted scientific experiments or investigations, which experiments shall be performed only under the authority of the faculty of some regularly incorporated medical college, university or scientific society," and that the Superintendent of Public Schools, on April 24, 1896, wrote, "Vivisection has never been practiced in the schools of the District of Columbia, so far as I have been able to ascertain after the most diligent inquiry. No legislation is necessary on this subject, because the authorities of the schools are radically opposed to vivisection except by experts for scientific purposes, and will do everything in their power, without legislation, to prevent its occurrence in the public schools."

One of the most irrational features of the previous bills has apparently been eliminated from the new or substitute bill printed on March 9, 1900, through the substitution of the words "warm-blooded" for "vertebrate," but there seems to have been some carelessness in carrying out this correction. In Sections 7 and 8 the license under the act is spoken of as one "for the performance of experiments on living animals," and I have already mentioned that Section 3 requires that "every place for the performance of experiments upon living animals" shall be approved and registered. There is also apparently some uncertainty on this point in Section 5. It is charitable to suppose that these slips and uncertainties are not intentional, but if due care had been exercised they would not have appeared.

In looking over the British law on this subject I was impressed by the following provision which would seem to afford experimenters considerable protection against persecution: "A prosecution under this Act against a licensed person shall not be instituted except with the assent in writing of the Secretary of State" (the authority administering this law). I am not a lawyer and can not say whether the omission of a similar safeguard from the present bill is based on legal grounds, but if not, then I do not care to comment on the motives of those who copied so much of the British law and left out this valuable protection to physiologists against unjust and malicious prosecutions.

Although I have not by any means exhausted the objections to this legislation, and have left untouched a number of just criticisms on it, already presented in various public documents, I see no necessity of occupying more time in a discussion of other objectionable provisions, after the hopelessly defective character of the bill has once been made sufficiently clear. I trust that it has been demonstrated to the satisfaction of the members of this Committee that no further legislation on this subject is necessary; that this law, in attempting to restrain abuses, of whose existence there is no evidence, would do far more harm than by any possibility good, by seriously hampering the work of scientific investigators; that many of the leading provisions of the bill are monstrously wrong in principle and would be most detrimental in practice to the interests of medicine and biologic science; that the proposed law is capable of being administered so as to prevent all animal experimentation, and does in fact explicitly prohibit a large number of important and useful experiments.

Before closing I should like to advert to two points which are pertinent to the discussion of this sort of legislation, viz.: its inequality and the experience with similar legislation in Great Britain.

The fact that legislation is class legislation is, I know, not decisive as to its propriety, but it does raise a prejudice, often a justifiable one, against it. Sir John Simon, in his testimony before the Royal Commission on Vivisection, forcibly presented the unequal character of such legislation as that contemplated in this bill. He said:

> You must take this question of physiology with the general social context; and I do this as impartially as I can when I think of projects of legislation in the present matter. I take up, for instance, one of these Bills, and I find this: "Whereas, it is expedient to prevent cruelty and abuse in the *experiments made on living animals for the purpose of promoting discoveries in the sciences of medicine, surgery, and physiology.*" . . . Do you suppose that one of Magendie's experiments, the worst of them, is more cruel to the sufferer of it than hare hunting to the individual hare, or fox-hunting to the individual fox? And is animal life less to be protected against "cruelty" when the life is sacrificed for purposes of science? You are proposing that physiologists shall be treated as a dangerous class, that they shall be licensed and regulated like publicans and prostitutes; what I would venture to put before you is, that this would be fancy-legislation, touching the relations of man to the lower animals at a little bit, and a comparatively unimportant little bit, of the subject-matter; and that society would come to such legislation with unclean hands. Who is the accuser of the physiologist? Society assumes a universal right to slaughter animals for its food, to cut their throats and wring their necks at its discretion, and neither stints its luxury (much less its hunger) in reluctance to take life, nor troubles itself much about painless methods of killing. To kill particular animals in particular ways is a considerable branch of national amusement, and the wealthy breed certain animals on a large scale exclusively to have sport in killing them, and for the unpracticed often to mangle where they do not kill. Also with a view to slaughter, or with a view to other service, society inflicts sexual mutilation on nearly all the males of the cattle, horses, sheep and swine, which it controls, and, as to swine, on many of the females. You never eat a mutton chop that does not come from an emasculated sheep; you rarely use a male horse that has not had its testicles cut out. Now, when the common habit of society treats domestic animals in this way, slaughtering and mutilating them at its will for use, for convenience, for luxury, and while battues and wager-slaughtering and hare-hunting are elements of national sport, it seems altogether monstrous to put into a separate category the extremely small use which physiology (for great human interests) makes of the lives of brute animals, and to have as the preamble of a bill that cruelty is to be prevented in that one relation while all other relations are to be left loose.

We have no opportunity to judge from actual experience of the practical results of vivisection legislation so restrictive and so unintelligent as that in this bill. The experience, however, for the last quarter century in Great Britain, the only country which has hitherto introduced legislation of this character, should be quite sufficient to warn law-makers elsewhere against the adoption of all such legislative proposals and it is the strongest incentive to scientific and medical men in other countries to resist to the utmost the imposition of similar shackles upon freedom of scientific investigation. The bill before us was copied in its main features from the British law, although, as I have pointed out, with restrictive additions and with the omission of important concessions and safeguards. The British law, although, unlike this bill, not prohibitive of any important kinds of experiment, surrounds the practice of animal experimentation with severe and harsh restrictions and has been rigorously enforced. That it has not crushed the life out of British physiology and experimental medicine is evidence of their inherent vitality and of the indomitable energy of scientific workers in that land. Of its harmful effects I shall bring testimony presently.

The law was enacted by Parliament in 1876, avowedly to satisfy public clamor, and at a period just before the beginning of modern bacteriology, which has furnished such irrefragible proofs of the benefits of animal experimentation to practical medicine. Lord Sherbrooke—then the Right Hon. Robert Lowe—has correctly characterized, in the following words, the report of the Royal Commission which was appointed to inquire into the existence of abuses of vivisection:

> The Commission entirely acquitted English physiologists of the charge of cruelty. They pronounced a well-merited eulogium on the humanity of the medical profession in England. They pointed out that medical students were extremely sensitive to the infliction of pain upon animals, and that the feeling of the public at large was penetrated by the same sentiment. They then proceeded to consider to what restrictions they should subject the humane and excellent persons in whose favor they had so decidedly reported. Their proceeding was very singular. They acquitted the accused, and sentenced them to be under the surveillance of the police for life. (*Contemporary Review*, October, 1876.)

Unfortunately physicians and scientists in England at the time made no such determined opposition against the proposed legislation as their colleagues are doing in this country in the case of the present bill. Many of them believed that acquiescence would put a stop to the mischievous agitation of antivivisectionists who, as the Royal Commission showed, had misled a considerable section of the public to credit their *ex parte* statements concerning the existence of serious abuses. In this belief our English brethren were grievously mistaken, and they have earnestly warned us not to fall into their error. This legislation has in no measure accomplished its avowed purpose to afford an antidote to unjust suspicions, nor is this failure due to any lack of rigor in the enforcement of the law. As Stephen Paget says:

> The working of the act is subjected to ceaseless espionage both inside and outside Parliament. Candidates at elections are heckled over it; bullying letters are written to Her Majesty's Ministers; scientific journals are ransacked to find evidence for "The Cause;" black-lists of men to be boycotted are published; and people are asked to give nothing to the big hospitals with schools, and everything to one or two little hospitals without schools.

As Dr. Bowditch has told you and as all familiar with their ultimate aims know, the antivivisectionists, in deference to whose wishes the British law was enacted, are not in the least satisfied with its operations and are clamoring for total prohibition. You will have no better success if you defer to their immediate desires as regards this bill, while you may be assured that its passage will encounter the hostility of the entire medical profession of this country and will inflict grievous injury on medical science and art. The truth is that this legislation is directed against a phantom, and the phantom will not be exorcised by any measure which stops short of the total prohibition of all animal experimentation, perhaps not even then.

Out of a considerable number of letters on this subject from English physicians, all to the same general purport, I have selected four on account of their weight of authority, which should convince you of the injury to scientific and practical medicine inflicted by the British law. The first letter which I shall present is from Lord Lister, president of the Royal Society, whose name is immortal in the annals of medicine, one of the greatest benefactors of mankind through his discovery and introduction of the principles of antiseptic surgery. It was written in 1898 and addressed to Dr. W. W. Keen.

### LETTER OF LORD LISTER.

*My Dear Sir.*—I am grieved to learn that there should be even a remote chance of the legislature of any state in the Union passing a bill for regulating experiments on animals.

It is only comparatively recently in the world's history that the gross darkness of empiricism has given place to more and more scientific practice; and this result has been mainly due to experiments on living animals. It was to these that Harvey was in large measure indebted for the fundamental discovery of the circulation of the blood, and the great American triumph of general anesthesia was greatly promoted by them. Advancing knowledge has shown more and more that the bodies of the lower animals are essentially similar to our own in their intimate structure and functions: so that lessons learned from them may be applied to human pathology and treatment. If we refuse to avail ourselves of this means of acquiring increased acquaintance with the working of that marvelously complex machine, the animal body, we must either be content to remain at an absolute standstill or return to the fearful haphazard ways of testing new remedies upon human patients in the first instance which prevailed in the dark ages.

Never was there a time when the advantages that may accrue to man from investigations on the lower animals were more conspicuous than now. The enormous advances that have been made in our knowledge of the nature and treatment of disease of late years have been essentially due to work of this kind.

The importance of such investigations was fully recognized by the commissioners on whose report the Act of Parliament regulating experiments on animals in this country was passed, their object in recommending legislation being professedly only to prevent possible abuse. In reality, as one of the commissioners, the late Mr. Erichson, informed me, no single instance of such abuse having occurred in the British Islands had been brought before them at the time when I gave my evidence, and that was toward the close of their sittings. Yet in obedience to a popular outcry, the Government of the day passed an act which went much further than the recommendations of the commissioners. They had advised that the operation of the law should be restricted to experiments upon warm-blooded animals; but when the bill was considered in the House of Commons a member who was greatly respected as a politician but entirely ignorant of the subject-matter suggested that "vertebrated" should be substituted for "warm-blooded;" and this amendment was accepted by a majority as ignorant as himself.

The result is that, incredible as it may seem, anyone would now be liable to criminal prosecution in this country who should observe the circulation of the blood in a frog's foot under the microscope without having obtained a license for the experiment and unless he performed it in a specially licensed place.

It can be readily understood that such restrictions must seriously interfere with legitimate researches. Indeed, for the private practitioner they are almost prohibitive, and no one can tell how much valuable work is thus prevented.

My own first investigations of any importance were a study of the process of inflammation in the transparent web of the frog's foot. The experiments were very numerous, and were performed at all hours of the day in my own house. I was then a young unknown practitioner; and if the present law had been in existence, it might have been difficult for me to obtain the requisite licenses; and even if I got them, it would have been impossible for me to have gone to a public laboratory to work. Yet without these early researches, which the existing law would have prevented, I could not have found my way among the perplexing difficulties which beset me in developing the antiseptic system of treatment in surgery.

In the course of my antiseptic work at a later period I frequently had recourse to experiments on animals. One of these occurs to me which yielded particularly valuable results, but which I certainly should not have done if the present law had been in force. It had reference to the behavior of a thread composed of animal tissue applied antiseptically for tying an arterial trunk. I had prepared a ligature of such material at a house where I was spending a few days at a distance from home; and it occurred to me to test it upon the carotid artery of a calf. Acting on the spur of the moment, I procured the needful animal at a neighboring market; a lay friend gave chloroform and another assisted at the operation. Four weeks later the calf was killed and its neck was sent to me. On my dissecting it the beautiful truth was revealed that the dead material of the thread, instead of being thrown off by suppuration, had been replaced, under the new aseptic conditions, by a firm ring of living fibrous tissue, the old dangers of such an operation being completely obviated.

I have referred thus to my personal experience because requested to do so; and these examples are perhaps sufficient to illustrate the impediments which the existing law places in the way of research by medical men engaged in practice, whose ideas, if developed, would often be the most fruitful in beneficent results.

Bue even those who are specialists in physiology or pathology, and have ready access to research laboratories, find their work very seriously hampered by the necessity of applying for licenses for all investigations and the difficulty and delay often encountered in obtaining them.

Our law on this subject should never have been passed and ought to be repealed. It serves no good purpose and interferes seriously with enquiries which are of paramount importance to mankind. Believe me, Sincerely yours,

LISTER.

The second letter is from the late Sir Thomas Grainger Stewart, professor of medicine in the University of Edinburgh, physician to the Queen, formerly president of the Royal College of Physicians of Edinburgh, and of the British Medical Association. The name of no British physician is more widely known and honored both in his own country and in America than that of Grainger Stewart, whose death occurred within the present month. The following letter was written in 1898.

### LETTER OF SIR THOMAS GRAINGER STEWART.

*My Dear Dr. Keen.*—I much regret to hear that you are threatened with the kind of legislation which has in this country proved so detrimental to all branches of physiological and pathological science, and consequently to practical medicine and surgery.

It may have been true as the antivivisectionists of this country asserted, that cruelty was inflicted upon the lower animals for purposes of experiment and demonstration, but I can certainly vouch for it that I never saw anything of the kind and I have been closely connected with the work of some of our chief medical schools ever since my graduation, nearly forty years ago.

But I do know of my own experience that the laws passed in the interests of antivivisection have proved a great hindrance to original research among us—not that experiment is forbidden, for competent men can as a rule get permission. But the restrictions, the delays, the formalities that have to be gone through are so irksome as to hinder many competent men from undertaking researches, and to make it almost impossible for such workers as are actively engaged in practice to attempt elucidating research on any special occasion that emerges.

I earnestly trust that a country which loves freedom as your country does, and which has during my professional lifetime made such enormous strides in advance as your country has, will not follow ours in adopting unfair and trammelling restrictions and checking the great career which American medicine has of late years been pursuing. With much regard, I am

Yours very truly, T. GRAINGER STEWART.

The next letter, also written in 1898, is from Dr. T. Lauder Brunton, physician to St. Bartholomew's Hospital, London, a physician of great eminence, and author of the most scientific and authoritative text-book on pharmacology and therapeutics in the English language.

### LETTER OF DR. T. LAUDER BRUNTON.

*Dear Dr. Welch.*—I regret extremely to hear that there is a movement in America to stop the progress of medicine by prohibiting experimentation upon animals. Those who have set this agitation on foot are no doubt well-meaning, but in their anxiety to prevent pain to the lower animals they are entirely forgetful of the consequences to man. It is through experimentation on animals that medicine and surgery have made such enormous strides of recent years, so that we are able to prevent the spread of infective diseases, to lessen mortality in such diseases as diphtheria, to relieve pain and induce sleep in ways that were unthought of thirty years ago, and to perform surgical operations on the abdomen which are now becoming so common because they are so free of risk, whereas formerly such operations entailed the almost certain death of the patient. The good-hearted, but sentimental and mischievous persons who oppose experiments upon animals forget that animals as well as men must die and that the natural end to which all these animals would come is probably much more painful than death at the hand of the physiologist. It is a want of conception of the importance of experimentation in increasing the power of the medical man to relieve pain and prevent death that causes sentimentalists to oppose it. As an illustration of this, I may mention that shortly after the antivivisection act was brought into force in England, Sir Joseph Fayrer and I were prevented from carrying on, at our own expense, experiments on the action of snake poison and the best way of preventing death from it. This was done because snakes were almost unknown in this country and death from their bite is almost unheard of. But at the very moment that we were prevented from doing the experiments here, the Government of India, knowing the importance of the research, as twenty thousand people die yearly from the bite of poisonous snakes in India, appointed their own officials, paying them salaries and providing them with all facilities to carry on the research in India which the Government at home was preventing Sir John Fayrer and me from doing at our own expense. The Indian government realized the danger of death from snake bite while the home government did not, and consequently the former forwarded the research in order to prevent the suffering and death of its subjects while the latter was prohibiting such a research. It was the ignorance of the home government which led it to do this; it was the knowledge of the Indian government which led it to act as it did.

In America, the ignorant and prejudiced will be sure to take up the antivivisection cry, while the wise and truly benevolent will oppose the bill. The passage of the antivivisection act in this country has interfered to an enormous extent with physiological work, and in order to do some of my investigations, the object of which was simply to find out what the action of certain medicines was that one might apply them to the relief of suffering mankind, I have been obliged to go to Paris to carry on my research in a foreign laboratory. It will be a great blow to the progress of the science of medicine in America if any such act is passed, because it will be much more difficult for American scientists to go to foreign countries in order to do their experiments than it is for men living in England.

I trust that the good sense of the American people will prevent any such act being passed, and I consider it the bounden duty of all American medical men who have the interests of their profession and patients at heart to oppose to the very utmost and by every means in their power the passage of any such act. Believe me *Faithfully yours,*

T. LAUDER BRUNTON.

The last letter is from Sir Michael Foster, member of Parliament, professor of physiology in the University of Cambridge, secretary of the Royal Society, the most distinguished physiologist of Great Britain, and one of the most distinguished in the world. No one can speak with fuller practical knowledge of the workings of the British antivivisection law than Professor Foster. The letter was written in 1890, and addressed to Professor Hodge of Clark University, Worcester, Mass.

### LETTER OF SIR MICHAEL FOSTER.

*My Dear Sir.*—It is not easy to estimate accurately the effect of the vivisection act in Great Britain. Undoubtedly during the period which has elapsed since it was passed there has been more, much more, physiological work than in the like period before the act; and on a principle not unknown to the founders of New England, viz., that persecution and difficulties engender zeal, we may look upon some of this as an unintended effect of a "penal measure"—for so the law lords spoke of it in the House of Lords when it was being passed. On the other hand, we can only conjecture what work might have been, had no such act been passed. Turning to the actual experience one can say that not only great annoyance, which is a very little matter, but great delay and loss of time, which is a very serious matter, have been experienced in researches which have been allowed; and quite apart from researches which have been actually forbidden by refusal of certificates and licenses. Many researches have been abandoned or let alone which would have been undertaken had there been no act. We all work on a ticket of leave. Some work is prevented, because the opportunity for work comes suddenly, unexpectedly, and before the ticket can be got, the opportunity has passed; for, though the officials do their best, I believe, to prevent unnecessary delay, a good deal of delay can not be avoided. Again, a man undertakes a research for which he gets his ticket, but the development of his research suggests experiments not provided for in his ticket; he has to wait until his ticket is amended, or until he gets a new ticket, and while he is kicking his heels waiting for a new permission, the spirit leaves him. Again, there are some experiments, for which it is hopeless or almost hopeless to expect to get permission, and the investigator is obliged to leave his research incomplete or, if he can, go abroad and complete it. There are several instances known to me where men have gone abroad to do what is forbidden at home, and I believe that such instances are by no means uncommon. The authorities, I believe, do their best to administer the act justly, but they are laymen not understanding the nature of physiological research, and moreover are politicians, having to defend their actions in the House of Commons before a clamorous and active faction of opponents to science.

I have just said that men go out of England to do particular experiments, and undoubtedly the act prevents men staying in England or coming to England to carry on research requiring vivisection, at least of the kind requiring special certificates. For instance, I myself can in my laboratory only offer facilities for research within the limits and under the difficulties of the act. No one in his senses who could go elsewhere would come to me to do imperfectly and under the great disadvantages what he could do freely and without hindrance elsewhere. I believe that had it not been for the act, we should have had many more men coming to work in our laboratories than we have.

I have always said and always shall say that the necessity of a restrictive law has never been shown. The English Commission failed to demonstrate any abuse such as could justify the measures adopted, and from what I know of America and Americans I am confident that *no such laws are needed with you.* Indeed, my objections to the act as a politician are quite as strong as my objections as a physiologist; the act is stamped with that mark of bad statesmanship, *meddlesomeness.*

The effect of such an act with you would be, I imagine, much as with us. It would not stop physiological work—it would worry it—it would prevent many important researches being made complete; it would lead men to follow out not the lines of research to which their ideas led them, but those which they *could* pursue without the restraints of licenses and certificates—it would, as with us, almost destroy the researches carried on by private individuals working apart from established laboratories, *and would certainly largely curtail* the usefulness of Clark University by increasing the tendency, which you will always have to strive against, toward the predominance of pedagogy over pure research.

The act took birth in England: 1, from the energy of *doctrinaires* of the upper middle class—the upper ten thousand had nothing to do with it—who had time and funds for public agitation, while men of science and doctors had something else to do and hated agitation; 2, because certain leaders in science and medicine, fearing the strength of the *doctrinaires,* advised a compromise—the compromise has proved to be one-sided. "The report of the commission *went beyond the evidence and the bill* went beyond the report;" further, some most objectionable features were added to the bill as it was being passed through Parliament *at the end of a* session. If the act had confined itself simply to demanding that no one should perform experiments who had not received a *general* license to do so, comparatively little harm *had been done; it is* the *special certificates* for particular kinds of experiments which give really all the trouble.

But if the time were to come over again I would fight tooth and nail against any act at *all,* on the ground that *all such legislative restrictions are unnecessary,* that instances of cruelty, that is, of heedless causing of pain on the part of physiologists, are, to say the least, rare, and that public opinion aided by the ordinary law. is quite sufficient to cope with such cases; (I, of course, assume that vivisection is absolutely necessary for the progress of physiology). And much as I hate public agitation, I should throw myself with all the energy I possess into agitating against such measures, sacrificing my little portion of present science for the sake of science to come. My advice to you is, accept no compromise whatever, refuse to admit for a moment the need of such a law, and fight against it everywhere, in the newspapers and on the platform, and, if the situation demands it, even imitate your opponents and refuse a political vote to a candidate who will *not pledge himself to vote against* it. I *do* not think I can say anything stronger than this last. To repeal a law is a very different thing from opposing the making of one. I scarcely think *that I shall live to see the repeal of our act, but if the* chance of success ever offers itself I trust I should be ready to carry out for ourselves the advice which I am now giving you.

Yours very truly, M. Foster.

Such are the opinions based on actual experience, of the foremost representatives of English surgery, medicine, therapeutics, and physiology, on the effects of the only antivivisection law in operation in any country, a law, moreover, bad enough but still far less repressive than that embodied in this bill. Can you wonder that biologists and physicians throughout this country are so earnest and active in their efforts to prevent the enactment of this bill? The opportunity which the introduction of this bill into Congress has afforded for an expression of the real sentiments of scientific and medical men has served to show the falsity of the assertion current in antivivisectionist writings that there is any material division of opinion in the medical profession concerning the utility of vivisection and the dangers to science inherent in this kind of legislation. I am aware that lists of doctors are reported in antivivisectionist publications purporting to show that many physicians are opposed to vivisection or approve special restrictive legislation. These lists, so far as published with any fulness, contain many names which will not bear scrutiny as to their professional standing. In the most frequently cited of these lists, that collected by the American Humane Society in 1894-95, I do not see how any right thinking person could have approved the statement headed "Vivisection without Restrictions," which is as follows:

> Vivisection, or experimentation upon living creatures, must be looked at simply as a method of studying the *phenomena of Life.* With it morality has nothing to do. It should be subject neither to criticism, supervision, nor restrictions of any kind. It may be used to any extent desired by any experimenter (no matter what degree of extreme or prolonged pain it may involve) *for demonstration* before students of the statements contained in their text-books, as an aid to memory; for confirmation of theories; for original research; or for any conceivable purpose of *investigation into vital phenomena.* We consider that sentiment has no place in the physiological laboratory; that animals have there no "rights" which Man is called upon to notice or respect. . . .

The comparatively small number of names signed, I must believe without due consideration, to this sorry, yes infamous, stuff is adduced by antivivisectionists as representing the proper ratio of physicians opposed to such legislative restrictions as we are considering, while the large number of those who refused to sign it is cited in support of this restrictive legislation. Could anything be more unfair?

I know no one, certainly no scientific man, who believes in vivisection unrestricted by morality, uninfluenced by judicious criticism and public opinion, without competent supervision, without regard for a serious purpose in making the experiment, without due care in the avoidance of unnecessary suffering, and without subjection to the statute law relating in general to the prevention of cruelty to animals. These are the restrictions which should and do control the practice of animal experimentation. No further legislation is needed to secure them, and no special legislation regulative of this practice has ever been suggested, which would not seriously interfere with useful and proper experimentation and, therefore, prove detrimental to the interests of medical science and art.

Surprise has been expressed that scientific men and the great body of the medical profession in all parts of this country should concern themselves so actively with contemplated legislation which in its immediate effects relates to a very limited area and affects directly the work of probably not more than a dozen men, if indeed of that number. Our solicitude to prevent the passage of this act is not greater than that of antivivisectionists throughout the country to secure it. Our opponents have hitherto signally failed in their repeated efforts to obtain the enactment of similar laws in the various states. They now seek Congressional sanction in the hope that it will promote their "Cause" throughout the country. We know, and scientific and medical men alone can fully know, the dangers to science and humanity which lurk in what may seem to some of you this unimportant bit of legislation. The medical and biologic sciences have advanced in these later years with strides unapproached and in directions undreamed of but a quarter of a century ago. New vistas of knowledge and power have been disclosed, the full fruits of which will be gathered by coming generations. The main cause of this unparalleled progress in physiology, pathology, medicine and surgery has been the fruitful application of the experimental method of research, just the same method which has been the great lever of all scientific advance in modern times. Strange as it may seem at the turning-point of the century, we are here, not as we should be, to ask you to foster and encourage scientific progress, but to beg you simply not to put legislative checks in its way. Our own contributions to this progress may now be small, but America is destined to take a place in this forward movement commensurate with her size and importance. We to-day should be recreant to a great trust, did we not do all in our power to protect our successors from the imposition of these trammels on freedom of research. Our appeal to you is not only in the name of science, but in the truest and widest sense in the name of humanity.

## SPECIAL ARTICLE.

### RELATIONS OF PHARMACY TO THE MEDICAL PROFESSION.*

### V.

As indicated in our fourth article (The Journal, page 1178) the pharmaceutical preparations of secret composition protected by trade-marked and fancy names are not entitled to medical patronage. There remain now for consideration as allied preparations several other classes, including: 6. Proprietary Pharmaceuticals—preparations under trademark or copyrighted names of which the general constituents are known, the purported formulas being represented by enumeration of ingredients more or less intelligibly, without information as to how a similar preparation could be produced.

#### FORMULA PREPARATIONS.

Preparations of this class, from the fact that the formulas are either printed on the labels or appear in the advertisements, are regarded as unobjectionable by many medical men, while they are condemned by pharmacists, as being impracticable and sometimes as being outright fictions. These positions are, on the part of both physician and pharmacist, often wrong, being based on incomplete information on the pharmaceutical chemistry involved in the preparations of many of them. The formulas have purposely been designed to mislead, or the satisfactory preparation is dependent on a certain often complicated reaction. A few examples of each kind will illustrate:

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* The fifth of a series of articles to appear weekly in The Journal, designed to correct the abuses from advertising and patronizing pharmaceutical specialties.

A certain make of "tri-iodides" is said to contain "in each tablespoonful as iodids, the *alkaloids of 30 grains each of* semen colchicum, phytolacca decandra, solanum dulcamara, with 10 grains sodium salicylate." Now, the alkaloid of colchicum is exceedingly rare, those of phytolacca and solanum have yet to be produced on a commercial scale, and it is a well-established fact that the iodids are the most insoluble compounds of the alkaloids—*in fact* the assay of many alkaloidal drugs is effected by precipitating the alkaloids as iodids. The preparation could not be made from the alkaloids but, by using the fluid extracts of the respective drugs, adding an iodid, probably potassium iodid, the compounds, if formed at all, will be in minute quantities and will be kept in solution by the large amount of liquid and especially the alcohol, since the iodids, as well as the bromids, of the alkaloids, are soluble in liquids of certain alcoholic strength. The formula for this preparation becomes, therefore, exceedingly simple, but on its face it looks very scientific. It is intended to captivate the physician and to mystify the pharmacist.

Of a simpler order is "tongaline," containing tonga, cimicifuga racemosa, pilocarpus, colchicin and sodium salicylate. These are mixtures of fluid extracts of drugs known to contain active principles, but in order to create and maintain a monopoly in their sale, the formulas pretend that they are made from the alkaloids.

### FORMULAS WITH "KINK PROCESSES."

A number of formulas are based on a somewhat different plan in that there is a "knack" in the preparation, as illustrated in one of the earliest and best known—the "hypnotic par excellence"—"bromidia." This is said to contain "15 grains each of chloral hydrate and potassium bromide and ⅛ grain each extract of hyoscyamus and genuine imported extract of cannabis indica in each fluidram." Cannabis indica extract is a complex resinous substance, as insoluble in water as is varnish, and its solution suggested the use of alcohol, and consequently aromatic elixir was employed as the vehicle or solvent, by pharmacists who were asked to compound the mixture by physicians, attracted by the formula, but who preferred to have it compounded by the pharmacist. On standing a short time the liquid separates in two layers, and the superior oily one can but momentarily be mixed with heavier liquid of much larger volume. The extemporaneous pounding was therefore very unsatisfactory and the orig-ors of the compound have had a monopoly of it for twenty rs. It has become exceedingly popular and is extensively d by the laity, especially by dipsomaniacs.

### A PHARMACEUTICAL PROBLEM.

The explanation is very simple. Chloral, in the presence of alcohol, is decomposed by alkalies into alcoholate of chloral, an oily liquid, *insoluble in water and specifically lighter than* water which, in the presence of syrup—from the elixir—rises to the top of the liquid. Its solvent power is almost as great as is that *of chloroform*, and it therefore extracts the alkaloidal principles of the hyoscyamus and cannabis, and all the medicinal agents except the potassium bromid will therefore be *found* in the immiscible top-layer of the liquid. With a large volume of the mixture, say 500 c.c., the amount of alkaloids may be so great as to cause fatal results from an ordinary dose, if the mixture be not thoroughly shaken before taken. Bromid of potassium is always slightly alkaline, it being necessary on the part of the manufacturer in *order* to insure stability and to produce an alkaline salt, to crystallize it from an alkaline solution. This alkalinity in the presence of alcohol breaks up the chloral hydrate. It has been *found* that by using water alone as the solvent a perfectly stable solution is obtained, and this is the secret of the "famous" hypnotic. While water has no effect on *cannabis extract, the solution* of chloral hydrate and potassium bromid in water has solvent properties nearly as great as chloroform, and this solution will therefore extract and hold in solution all the active principles of the cannabis extract, leaving only some inert resin. The following is the formula:

LIQUOR CHORALIS ET POTASSII BROMIDI COMPOSITUS.

| | | |
|---|---|---|
| R. | Chloralis hydratis | |
| | Potassii bromidi, āā | 5 |
| | Ext. *cannabis indicæ* | |
| | Ext. hyoscyami, āā | 1 |
| | Aquæ, q. s. ad | 25 |

Dissolve the chloral and potassium bromid in 15 c.c. of hot water and add the solution in small quantities to the extracts, previously triturated with a little powdered pumice stone, contained in a mortar; *let stand* until *cold*, filter through cotton, adding water if necessary, with a little *caramel*, and if sweetness be desired, add a very little saccharin.

This is practically the strength of chloral and potassium bromid, which the *preparation*, as *shown by* analysis, contains.

### A CHEMICAL PROBLEM.

As *illustrative of the rôle* chemical reactions play, the prescriptions of Dr. Barclay, "arsenauro" and "mercauro," are unique. These appear to be especially commended from the *fact "that they are to be prescribed only on prescriptions,"* etc., and that the formulas are apparently bona-fide—and so they are. Arsenauro is said to "contain in each 10 minims, *1/32 gr. each of arsenic and gold bromids*," and "to be a potent reconstructive." Many failures attended the earlier attempts to make a permanent solution, until some medical man and pharmacist in Pittsburg discovered the secret, viz., that the arsenous acid, as ordinarily employed, must be converted into arsenic acid before a stable compound with gold tribromid can be made. The formulas changed hands several times until they reached an adept in exploiting and had quite a run. The National Formulary gives the following, which differs only *in containing 1/10 gr. tribromid of arsenic*, instead of 1/32 gr.

LIQUOR AURI ET ARSENII BROMIDI.

| | | | |
|---|---|---|---|
| R. | Acidi arseniosi | 2 | 5 |
| | *Auri tribromidi* | *3* | *25* |
| | Aquæ bromi et aquæ destil, q. s. ad | 1000 | |

The arsenous acid is added to 135 c.c. of bromin water, contained in a flask, and heated until free bromin has disappeared; then add bromin water until the solution does not become colorless *after* some time. *Heat* the solution in a capsule until excess of bromin has been expelled, dilute with water to 900 c.c., dissolve in this the gold tribromid and then add water to make 1000 c.c.

It will be observed that in the first instances here mentioned, *there is no originality or skill required in the process*, as they are mixtures such as any competent pharmacist should be able to prepare. The "formulas" have directly or indirectly originated with some prescriber and have been appropriated for the purpose of exploitation, monopoly being secured through the use of trade-mark names.

### PROTECTION TO INVENTORS.

The two last-mentioned preparations are in an entirely different category. In one, superior pharmaceutical knowledge and skill *are required to form a uniform and stable solution of* the cannabis extract and chloral and potassium bromid. The successful production was certainly as great an invention as was that of the traditional lever stovelid-lifter and a thousand and one little ideas which have made fortunes for their inventors. It was a pharmaceutical invention, and as such should have been entitled to limited protection through patent on the process. This would have prevented secrecy, protected the original inventor, and made the entire product public property through expiration of the patent. The same may be said of the arsenical preparation. That the arsenous acid must be converted into arsenic acid, as far as *applied to* this preparation, was, it is believed, an invention, showing originality and chemical skill. If the process had been patented the inventors would have had *some* protection, the patent would have been valuable and a princely royalty could have been secured for them as compensation. Instead they sold (?) their invention for a "mess of pottage."

The position on this class of medicines should therefore be the same as on the first-named. Their claims for medical patronage based on invention must be proved by patent on the process. All parties concerned will then be protected, and medical and pharmaceutical literature will be preserved.

A committee of control, as already proposed, would be of great service in protecting inventors and determining the status of these medicinal articles.

The next class to be considered will be Pharmaceutical Specialties.

# Therapeutics.

## The Treatment of Seasickness.

At a recent meeting of the Northumberland and Durham Medical Society, McDougall (*British Medical Journal,* March 24, 1900, p. 707) described the results he had obtained in the treatment of seasickness by the hypodermic injection of atropin and strychnin. He had employed these remedies in 47 cases, with complete success in forty and with partial success in the remainder. The doses used have been from 1/60 to 1/30 grain of strychnin sulphate and 1/150 gr. of atropin sulphate dissolved in from 10 to 15 minims of peppermint-water. When necessary the dose was repeated in a few hours or on the next day. The injection should be given at the onset of nausea or discomfort, or as a prophylaxis in susceptible persons. The symptoms of seasickness being those of circulatory depression and cerebral anemia, this stimulating treatment is preferable to the use of sedative drugs, as it places the patient in the best position to avail himself of the natural prophylactics—food and exercise.

## Dysentery.

Dr. J. O. Samtchouk, a Russian military physician, treats dysentery in the following way: As the first dose, ʒiv to v of sodium sulphate are given; about two hours later, ʒii of sodium bicarbonate; two hours later, gr. iv of ergotin. This amount of ergotin is repeated once or twice a day, according to the amount of blood found in the stools. The following is also given:

| | | |
|---|---|---|
| ℞. | Bismuthi subnit | gr. iv |
| | Acidi tannici | gr. ivss |
| | Quininæ sulph | gr. ii |

M. ft. One powder. Give three or four such powders a day.

After each stool, in old cases, tannin douches are used in addition, ʒi to 4 or 5 glasses of warm water. As food, is given a decoction of barley, to which are added butter, eggs and bread. Tea is given for drink. Recovery is said to result in two or three days in recent cases. —*Merck's Archives.*

## Treatment of Ozena.

Bommier recommends the following course of treatment to be carried out by the patient: Twice a day he is to take a nasal douche of boiled water plus a *tablespoonful of salt to the* liter, using for this purpose a Weber siphon, elevated about two feet above his head. During the douche he should breathe through his mouth, avoid swallowing, and keep the soft palate raised by pronouncing the vowel a. After the douche the patient is to introduce the following ointment into his nasal fossæ, using for each side a bit the size of a bean, while holding his head backward:

| | | |
|---|---|---|
| ℞. | Menthol | gr. iv |
| | Acidi borici | ʒss |
| | *Vaselini alb* | ℥i |
| | *Olei geran. rosat* | gtt. xx |

M. ft. Unguentum. Sig. For external use.

—*Medical News.*

## Formalin-Alcohol in Night-Sweats of Tuberculosis.

At a recent meeting of the Berlin Medical Society, Hirschfeld (*Berliner Klin. Woch.,* 1900, No. 15, p. 326) reported the results of local application of a mixture of equal parts of formalin and absolute alcohol by means of a soft brush or a cotton swab in the suppression of the sweating in cases of tuberculosis. Under no circumstances should all of the clothing of the patient be removed, as the vapor set free from the warm skin would gain access and cause annoyance to the eyes and respiratory organs. The patient should wear at least a shirt, which can be thrown over his head. In practice the chest and the abdomen are covered with rubber cloth, fastened about the neck, and drawn over these parts and kept in place for an hour after the application is made. This mode of treatment was pursued in 100 cases of pulmonary tuberculosis without unpleasant results in any. In only four of the cases was the desired effect not attained. In some instances a single application sufficed for weeks. In others it had to be repeated. The skin appeared to bear the medicine well. The chest and the abdomen, anteriorly and posteriorly, were painted at one sitting, and the legs, if involved, on the following day. When the head was the seat of trouble, cotton squeezed out of the solution was rubbed on it. The application should not be made to wounds or abrasions of the skin, such as may be induced by a mustard plaster or iodin, and also not to the nipples, the umbilicus, the genitalia and the anus. Slight burning follows the application, but this soon disappears. In persons with a delicate skin the concentration of the application should be lessened. The patient should not be permitted to use the solution himself.

## *For Intestinal Dyspepsia with Flatulence.*

| | | |
|---|---|---|
| ℞. | Pepsini puræ | |
| | Pancreatini, āā | gr. xxx |
| | Pulv. carbo. liqui | |
| | Bismuthi subgallatis, āā | gr. lx |

M. Ft. powders xii. Sig. One before each meal.

—*Wells: Medical Record.*

## Palatable Trional Mixture.

One of the objections to trional is its difficulty of solution and also its unpleasantness of administration when given in the usual method. The following will be found an excellent method of making a palatable mixture.

| | | |
|---|---|---|
| ℞. | Trional | ʒii |
| | Ol. amygdal. dulc | ℥i |
| | Gum acac | ʒiv |
| | Syrup tolutan | ℥i |
| | Aquæ aurant. concent | ʒiv |
| | Aquæ pur. q. s. ad | ℥iv |

M. Ft. Emulsion.

Given in this way the hypnotic effect is as pronounced, and far more readily obtained than in the present method of administering the drug. —*M. A. H. Thelberg, New York City.*

## Tubercular Syphilides.

Dr. A. H. Ohmann-Dumesnil (*St. Louis Med. and Surg. Jour.*) suggests the following local applications for tubercular syphilides:

| | | |
|---|---|---|
| ℞. | Acidi salicylici | gr. xx |
| | Ichthyolis | ʒiv |
| | Ung. aquæ rosæ | ℥i |

M. Sig. Apply thoroughly twice a day.

*If there be objections to using an ointment, the following,* which is but a type of preparations to use, will be found very efficient. It is dry, water-proof, and not easily removed by friction:

| | | |
|---|---|---|
| ℞. | Acidi salicylici | gr. xx |
| | Cocaini hydrochloratis | gr. iv |
| | Traumaticini *or collod. flex* | ℥i |

M. Sig. Paint on affected parts twice a day.

After the disappearance of the skin symptoms a bland ointment should be applied at night. An excellent one is the following.

| | | |
|---|---|---|
| ℞. | Hydrarg. chloridi mitis | ʒss |
| | Ung. aquæ rosæ | ʒii |

M. Sig. Apply thoroughly at night.

## Treatment of Alcoholism.

Morton (*Brooklyn Med. Jour.,* May 26) does not restrict himself to any special drug in the treatment of alcoholic cases, but individualizes his treatment. In some cases he stops the use of alcoholics on the first day and in others continues it for three or four days after admission, though not longer as a rule. He believes in stopping the use of the intoxicant as rapidly as possible, not so soon as to shock the person or start up a delirium. The drugs he prefers are strychnia in small doses to strengthen the heart, a laxative to relieve arterial congestion, and a sedative like bromid of soda. For old drinkers he gives liquid diet every two hours, occasional baths and rest in bed. He uses chlorid of gold in fractional doses, and hypodermics of strychnia and atropia, with good results, also extract of ipecac in small doses in a glass of whisky three times a day until the patient is thoroughly nauseated. He thinks the saving of life in critical cases is due to the use of heart tonics and nourishing diet given frequently. He does not employ chloral, hyoscyamin or hydrobromate of hyoscin.

### Treatment of Influenza.

Johnson (*Med. Review,* May 12) finds that quinin is one of the best preventives of influenza, and irrigation of the mouth and nasal cavities is also of value. Fumigation of the apartments of the influenza patient should be done even before the convalescence. To prevent relapse, the patient should not be allowed to get out of bed within twenty-four hours after complete subsidence of the fever, and in some cases even this is not sufficient. In checking la grippe at the onset diaphoresis is of value and if we can also produce a sialorrhea it will have a good effect. These combined results may be obtained with pilocarpin. Phenacetin and Dover's powder may be used for their analgesic and diaphoretic effects, and, if pilocarpin is contraindicated, quinin and Dover's powders, hot lemonade and a hot foot-bath may be used. For elimination and cleaning of the alimentary canal, calomel in divided doses is to be recommended. For the pains, headache and neuralgia, he has found the use of salipyrin and phenacetin of value. Quinin and salicylates hold first place as specifics for this disease. For the special symptom of nasal catarrh he offers the following prescription:

℞. Mentholis ..............................gr. i
Magnesiæ carbonatis levis................gr. v
Cocainæ muriatis ......................gr. v
Sacchari lactis .........................ʒiss
M. Sig. As snuff.

As a substitute for the above, finely powdered white sugar and camphor may be used as a snuff. Syringing the nasal cavities with Dobell's solution is good practice. A teasing cough is often relieved by occasionally spraying with

℞. Cocainæ ...............................gr. v
Antipyrin ...............................℈ii
Aquæ gaultheriæ .........................ʒii

The cocain may be omitted. Strychnia is useful in the depression of and after la grippe. He has found asafetida, combined with tonics, of value.

### Pruritus Ani.

Adler's treatment for pruritus ani (*Philadelphia Medical Journal,* May 12) consists largely in paying attention to the removal of the factors complicating pruritus, if such exist, and then giving local treatment for itching. It is important to see that there is a daily evacuation of the bowels, and if necessary, medicine should be used for this purpose. In all cases there is more or less pruritus of the hemorrhoidal veins, and he is in the habit of seeing the patient daily for a time and using an injection into the cavity of 1 to 2½ drams of the following prescription:

℞. Fluid ext. hamamelidis.....................℥i
Fluid ext. ergotæ
Fluid ext. hydrastis
Comp. tinct. benzoini, āā..................ʒii
Olei olivæ or lini, carbolized (5 per cent.)..℥i
M. Sig. Shake well before using.

The patient is advised prior to using this injection to remain quiet and resist the sensation of immediate evacuation. On the first visit, if the skin has a very hard and dry surface, he paints around the anus for several inches with a strong (saturated) solution of silver nitrate. If the skin is broken, a little 2 per cent. solution of cocain is used to prevent eruption from this application. The application of silver may have to be repeated two or three times, not oftener, however, than every third day. As soon as the silver is dried he smears over the anus and the cutaneous surface of the parts for a distance of about 2 inches, the official citrine ointment in full strength and repeats on subsequent visits. Over this he uses a wad of absorbent cotton, kept in place with a T-bandage, which is to be worn all day and over night. If the itching should annoy during the night the patient is advised to use hot water as hot as can be borne, but under no consideration to rub the parts. After using the water he is directed to use a solution of black wash or, what is better in some cases, calomel ointment applied locally. Prior to coming to the office for the next treatment he may wash the parts with castile soap, though this is not essential as a routine practice. No rubbing is to be permitted. For the first two or three weeks the patient is seen daily, then every second day for a like period or longer time; after that once or twice a week will suffice until the disease is conquered. The treatment should be continued for about six months. A definite promise of cure should not be given, and he warns the patient that the itching may return any time, but that it must not be considered a bad sign. Sometimes during the use of nitrate of mercury ointment the parts become sore, presumably from scratching during sleep. Under these circumstances the ointment may be discontinued for a few days and calomel ointment substituted. He has never seen any bad effects from mercury. With a large number of cases thus treated he has not had a single failure.

## Medicolegal.

**Five Dollars Not Enough for Scalp Wound.**—The General Term of the City Court of New York holds, in the case of Levison vs. Bernheimer and others, that an allowance by a jury of five dollars is insufficient to compensate a person for a lacerated scalp wound that a physician washed with bichlorides and bandaged up, where same was found to have been caused by the negligence of the defendants.

**Destruction of House Over Sick Person.**—The owner of a house who knows that a member of the tenant's family whose term as lessee has expired is sick and unable to leave her bed without danger, the appellate division, second department, of the Supreme Court of New York holds, in Prieser vs. Wielandt, is liable for all the natural and necessary consequences which he might or should have reasonably anticipated from proceeding to demolish the house over such sick person, although no actual blow is struck the latter in the course of the destruction of the building.

**Can Recover Compensation Without Certificate.**—The Court of Civil Appeals of Texas reaffirms, in the case of Carleton vs. Sloan, that a regular practicing physician, holding a diploma from an accredited medical college chartered by the legislature of the state in which it is situated, who has had such diploma duly filed and recorded in the county of his residence, where he has practiced his profession, can recover for professional services rendered by him, notwithstanding he may have never obtained from a medical board appointed by a district judge of Texas a certificate to practice medicine.

**Entitled to Reward for Finding Dead Body.**—The Supreme Court of Nebraska holds that the mere fact of being one of a party discovering a dead body for which a reward has been offered is not of itself sufficient to entitle one to share in the reward. It must further appear that the efforts put forth were in conjunction with the party who succeeded in the search, and with whom there was co-operation for that purpose; that such persons were acting in concert, and by their joint efforts the desired end was accomplished. Therefore, the court holds, in Elkhorn Valley Lodge vs. Hudson, where many persons are engaged in the search for a dead body, for the recovery of which a reward is offered, and one acting on his own account, independent of the others, and for the purpose of securing the reward, succeeds in finding the missing body, he will be entitled to the whole of such reward.

**Non-Expert Can Not Say About Legal Capacity.**—The Supreme Court of Rhode Island says that the uniform practice in that court has been to permit non-expert witnesses to testify to facts which they have observed bearing on the mental condition of a testator, and then to give their opinions as to his mental condition, derived from those facts. But it holds, in Hopkins vs. Wheeler, clearly inadmissable the question whether a certain person was in a condition to make a will, asked of a witness who was not an expert on the subject of mental capacity. It condemns the question because it calls for the opinion of the witness as to the degree of mental capacity required by law for the making of a will.

**Valid Contract with Employee.**—The Supreme Court of Georgia holds, in Petty vs. Brunswick & Western Railway Company, that a contract between an employee and his master, or another acting in the latter's interest, such as a relief and hospital association, by the terms of which contract the employee, when physically injured, whether as a result of his own negligence or not, or when sick, is to receive pecuniary or other valuable benefits, and which stipulates that his voluntary acceptance of any such benefits in case of injury is to operate as a release of the master from all liability on account thereof, is not contrary to public policy. The court considers that such a contract secures to the employee substantial benefits, and that the master has contributed to the fund for the payment thereof constitutes a valuable consideration. as to the employee; and this, it maintains, is true though the employee himself made a small monthly contribution to that fund. So it holds that a contract of this kind is not wanting in mutuality. Furthermore, one who deals with an association as a legal entity capable of transacting business, and in consequence receives from it money or other thing of value, the court holds, is debarred from denying the legality of its existence or its right to contract. This settled, the court then more particularly holds that the acceptance by an injured employee of any benefit under a contract of the kind first-above described is an election on his part to look exclusively to that source for compensation on account of the injury, and amounts to a complete satisfaction of his claim for damages against his master therefrom arising.

**Liability for Injury by Private Ambulance.**—In Green vs. Eden the Appellate Court of Indiana has affirmed a judgment for damages for the injury of a pedestrian by an ambulance. Among other things, the court holds that it can not assume, from an averment that the defendants were operating a "hospital ambulance," that the ambulance was a public vehicle, and being operated for the public good. Nor does it consider that it was necessary to aver that they derived benefit from the operation of the ambulance. But one of their defenses was that they had entered into a contract with the city whereby they bound themselves to keep a hospital ambulance for the use of the city, and to furnish therefor a horse and driver, the ambulance to be under the control of the dispensary surgeon, and all calls coming through the city dispensary must be promptly answered, and that when the injury complained of was inflicted the ambulance was, in accordance with that contract, under the exclusive control and direction of the surgeon in the employ of the city, then and there in charge of the ambulance. Nevertheless, the court not only pronounces inapplicable that line of cases holding that a municipal corporation can not be held liable for damages resulting from the negligent act of a driver of a city ambulance while driving through its streets, but it holds that the defendants could not escape from the results of their alleged negligent acts by saying that when the injury in question occurred the ambulance was under the management, control, and direction of the dispensary surgeon, an employee of the city. The city, through its servant or employee, the surgeon, it holds, could not authorize the defendants, through their servant, the driver of the ambulance, to be guilty of actionable negligence, or recklessness, or carelessness in driving the ambulance through the streets of the city at a high and dangerous rate of speed. Again the defendants argued that the plaintiff had failed to make a case, because it was established that when he was injured the ambulance was conveying an injured person to the hospital, and was being driven at a high rate of speed, at the direction of the surgeon, and that there was necessity for so doing to save life. However, to sustain such a proposition by a judicial decision would, the court thinks, establish a dangerous precedent. It may be, and doubtless is, it maintains, as necessary and important to protect the life and limb of the innocent pedestrian upon the street, whether child or adult, whether infirm or in the full vigor of years and health, as it is of the person who is being conveyed in an ambulance. And to establish any other rule, it declares, would be to wholly disregard the rights and life of the pedestrian under such circumstances, which it is not willing to do.

**Construction of Contract for Cure.**—In Wellman vs. Jones, the Supreme Court of Alabama had before it an action on a contract which provided that, if Jones, the plaintiff in the court below, would place his brother in a certain named institute, to be treated as a patient addicted to the excessive use of morphin and chloral, and would pay in cash the sum of one hundred dollars to the proper officer of the institute, the party signing this contract would return, on demand, to the said Jones, the said sum of one hundred dollars, provided his brother was not fully and permanently cured by the treatment of said institution of the use and habit of morphin and chloral. This contract, in terms, the supreme court, first of all, declares, was plainly an original undertaking between the said Jones and the defendant, and consequently not open to the defense of the statute of frauds relating to "promises to answer for the debt, default, or miscarriage of another." As shown by the evidence, the brother in question was addicted to the habitual and excessive use of morphin and chloral, and it was of this excessive use and habit, by the terms of the contract, he was to be cured. He entered the institute, and received treatment for that purpose, and, after receiving treatment, he left said institute, claiming that a cure had been effected, but within a short while thereafter returned to his former habit and excessive use of these drugs. This leads the supreme court to say that it thinks the fair and reasonable interpretation to be given to the words "fully and permanently cured," as employed in the written contract sued on, when construed in the light of the attendant conditions and circumstances, was that the patient should be restored to the normal condition of body and mind, with the same will power to resist the desire to indulge in the use of morphin and chloral that he possessed and enjoyed before the habit was acquired. It would be an unreasonable construction of the contract, it maintains, to say that it was the intention of the parties that the patient should be put in that condition that he could never again take the drug—a contract impossible of performance—if by the cure the patient was restored to the normal condition of body and mind and will power possessed before the habit was acquired. But if, as a matter of fact, a cure had not been effected in accordance with the conditions of the contract, the court holds that the plaintiff would not be deprived of his right of action growing out of the failure to cure, although, at the time his brother left the institute, its managing officer, as well as the plaintiff and his brother, were under the mistaken belief that the latter had been cured. Moreover, the court holds that it was no defense to an action on this contract that neither the institute nor its managing officer had a certificate or license from the medical board of examiners to practice medicine or sell drugs, the contract by the defendant being to pay back to the plaintiff the amount paid by him to a proper officer of the institute, in the event a cure of his brother was not effected under the treatment to be given by the institute. There was nothing in this contract, the court says, violative of any provision of the statute against the practice of medicine without a certificate from the board of examiners. Again, so far as the institute itself, a domestic corporation, was concerned, the court says that it is impossible to conceive of a corporation engaging in the practice of medicine, or of conforming to the requirements necessary to obtain a certificate from the board of medical examiners. These provisions of the law can not be applied to a body corporate, and were never so intended. They can only be made to apply to persons or individuals capable of complying with the requirements necessary to obtain the certificate.

# Societies.

## COMING MEETINGS.

American Medical Association, Atlantic City, N. J., June 5-8.

Association of Military Surgeons of the United States, New York City, May 31 to June 2.

American Laryngological, Rhinological and Otological Society, Philadelphia, May 31, June 1 and 2.

New Hampshire Medical Society, Concord, May 31 and June 1.

International Association of Railway Surgeons, Detroit, Mich., May 30 to June 1.

Baltimore & Ohio Association of Railway Surgeons, Atlantic City, N. J., June 1-2.

Conf. of State and Prov. Bds. of Health of N. A., Atlantic City, N. J., June 1-2.

American Academy of Medicine, Atlantic City, N. J., June 4.

American Medical Publishers' Association, Atlantic City, N. J., June 4.

American Medical Editors' Association, Atlantic City, N. J., June 4.

Association of American Medical Colleges, Atlantic City, N. J., June 4.

Medical Society of New Jersey, Atlantic City, N. J., June 4.

New Mexico Medical Society, Santa Fe, June 5.

*American Association of Acting Assistant-Surgeons*, U. S. Army, Atlantic City, N. J., June 6.

Rhode Island Medical Society, Providence, June 7.

Medical Association of Delaware, Rehoboth, June 12.

Massachusetts Medical Society, Boston, June 12-13.

Oregon State Medical Society, Portland, June 26-27.

Colorado State Medical Society, Denver, June 13.

Maine Medical Association, Portland, June 13-15.

South Dakota State Medical Society, Aberdeen, June 14.

Indian Territory Medical Association, Wagoner, June 19-20.

Wisconsin State Medical Society, Milwaukee, June 20.

Third District Branch of the New York State Medical Association, Binghamton, N. Y., June 21.

Second District Branch of the New York State Medical Association, Schenectady, N. Y., June 28.

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**Oregon State Medical Society.**—At the annual meeting of this Society, to be held in Portland, Ore., June 26 and 27, Dr. A. M. Phelps, of New York City, will give two addresses, and operate on cases to illustrate his remarks.

**Texas State Medical Association.**—B. E. Hadra, of Waco, was elected president of the Texas State Medical Association, at its recent meeting. Galveston was chosen as the meeting-place for the next session, to be held in April, 1901.

**Thirteenth International Medical Congress.**—During the week of this Congress, to be held in Paris, August 2-9, free admission to the Paris Exposition will be granted to members of the Congress. To secure this, members will receive a special card by applying to the office of the Congress, 21 rue de l'École-de-Médecine.

**Brazos Valley Medical Association.**—At the recent meeting of this Association, in Caldwell, Texas, the officers elected for the coming year were: president, L. P. Oliver, Caldwell; first vice-president, M. L. Langford, Baileyville; second vice-president, E. S. Ferguson, Cameron; secretary, W. B. Briggs, Easterly; treasurer, J. W. Hudson, Milano.

**American Proctologic Society.**—The following officers were elected by the American Proctologic Society, at Washington, D. C., May 5: president, Jas. P. Tuttle, New York City; vice-president, Thos. Chas. Martin, Cleveland, Ohio; secretary, Wm. M. Beach, Pittsburg, Pa.; executive council, S. T. Earle, Jr., of Baltimore, Md.; A. B. Cooke, of Nashville, Tenn.; J. R. Pennington, of Chicago.

**International Congress of the Medical Press.**—The sessions will be held in the United States Press Pavilion, Paris Exposition, July 26 to 29. The American delegates are as follows: From the Association of American Medical Editors —Drs. J. M. Mathews and Horace Grant, Louisville, Ky.; George F. Butler, Alma, Mich.; George H. Simmons, Chicago; C. F. Taylor and H. A. Hare, Philadelphia; Dillon Brown and Daniel Lewis, New York City; Thos. H. Hawkins, Denver, Colo.; Henry W. Coe, Portland, Ore. Those from the American Medical Publishers' Association are: Dr. J. C. Culbertson, Cincinnati, Ohio; J. MacDonald, New York City; Drs. Ferdinand King, New York City; Charles Wood Fassett, St. Joseph, Mo.; Landon B. Edwards, Richmond, Va. Those from the Medical Press Club of the Mississippi Valley are: Drs. I. N. Love, St. Louis, Mo.; Frank P. Norbury, Jacksonville, Ill.; Alexander J. Stone, St. Paul, Minn.; John Punton, Kansas City, Mo.; Hanau W. Loeb, C. G. Chaddock, and O. F. Ball, St. Louis. Interesting papers on timely topics will be presented by delegates from the various countries. A symposium on "The American Idea of an International Press Congress" will be read by Dr. Charles Wood Fassett, of the *Medical Herald*, St. Joseph, Mo. Dr. I. N. Love, editor of the *Medical Mirror*, St. Louis, Mo., will present a thesis on "The Relationship of a Medical Editor to the Publisher."

**Toronto Tuberculosis Association.**—This Association held its inaugural meeting recently. Dr. E. J. Barrick, Toronto, was elected its first president. The objects of the Association were outlined by Dr. Barrick, in his presidential address. An active campaign will be at once pushed toward securing a large membership, first 1000 and then gradually extending until there is something like 5000 members. The city council will be appealed to for the purpose of submitting a bill to the rate-payers at the next municipal elections authorizing the city to expend $50,000 in the erection of a sanitarium. In addition to this an appeal is to be made to philanthropically disposed persons for contributions, donations and bequests. Then a campaign of education will be enthusiastically prosecuted along the line of showing the people that it will be better to expend money in this direction than for the orphans of the victims of the disease. It is presumed that there are 8000 consumptives in Ontario; and the only sanitarium accommodation provided for these unfortunates is the fifty beds at the Gravenhurst institution. The problem which this Association will try to solve is the bringing of sanitarium treatment within the reach of the other 7950 afflicted ones. It was largely through the efforts of this Association that the Ontario government granted legislation toward helping municipalities in the erection and maintenance of these institutions.

**Confederation of Examining Boards.**—The National Confederation of State Medical Examining and Licensing Boards, will hold its tenth annual meeting, at the Hotel Traymore, Atlantic City, N. J., Monday, June 4, the morning session at 9:30, the afternoon at 2:30 o'clock. The program includes the following: Address of Welcome, by Hon. F. P. Stoy, Mayor of Atlantic City; Address of Welcome on Behalf of the Medical Profession of Atlantic City, by W. Blair Stewart; Address of Welcome on Behalf of the State Board of Medical Examiners, of New Jersey, by William Perry Watson, Newark; Response, by Vice-President N. R. Coleman; Annual Address by the President—"The Work Accomplished under the Kentucky Law;" "Associate Medical Examining Boards," by Charles A. Groves, East Orange, N. J.; "A Brief Review of the Medical Curriculum of the United States with Special Reference to its Defects and Indicated Modifications, as Demonstrated by the State Medical Examinations of Pennsylvania;" Henry Beates, Jr., Philadelphia; "The New Medical Law of Ohio," by Hon. Maro J. Love, Bloomingville; "The Co-operation of the Medical Profession of the United States with the National Confederation of State Medical Examining and Licensing Boards in Establishing Interstate Reciprocity for the License to Practice Medicine," by Emil Amberg, Detroit, Mich.; Discussion: "What Steps Shall be Taken to Establish a Uniform Standard of Preliminary Requirements in Accordance with the Recommendations Contained in the Report of the Committee on Minimum Standards, Adopted June 5, 1899?" The following members will lead—N. R. Coleman, Columbus, Ohio; William Warren Potter, Buffalo, N. Y.; Augustus Korndoerfer, Philadelphia, Pa.; Joseph M. Mathews, Louisville, Ky.

## Illinois State Medical Society.

*Fiftieth Annual Meeting, Springfield, May 15-17, 1900.*

### MEDICINE OR SURGERY: ARE THEY SEPARATE? IF NOT, WHICH IS THE SCIENCE, WHICH THE SPECIALTY?

Dr. A. C. Corr, East St. Louis, delivered the address of the section on practice of medicine, using this subject. He said that medicine and surgery are inseparable in practice, except in the extremes; that medicine is a science and embraces all that comes under the head of the practice of medicine; that the tendency to be enticed by the glamor of surgery for its mere physical appearances is strong; but physicians forget that tissues have properties that may by a classified derangement constitute a disease and that these properties may be modified by medicines so as to correct the aberration and cure the disease. If surgery arrogates much, medicine must become in a restricted sense a specialty. The well-informed general practitioner is the only one who can comprehend the whole situation, is the safest one to trust, and the best exponent of the science and practice of medicine. None are competent to practice a specialty until they have studied and practiced general medicine for at least ten years.

Dr. M. S. Marcy, Peoria, said that not every physician is a surgeon by any means and that the attempts of various physicians to become one have been detrimental to the population. This is especially true since appendicitis has become such a fashionable disease and there is a furor for operating. Owing to this, many lives have been sacrificed by inexperienced practitioners trying to operate on cases of appendicitis.

Dr. H. B. Brown, Decatur, said that the specialist should first be a general practitioner, and as such must necessarily have some knowledge of surgery, although his manual dexterity may not be as fully developed.

Dr. R. H. Henry, Peotone, said that the country doctor must learn to amputate a limb, to ligate an artery, and to perform laparotomy, etc., consequently he is a surgeon in the strict sense of the word, and that every practitioner must qualify himself the best he can to do surgical work.

Dr. O. B. Will, Peoria, said that some practitioners make good diagnosticians, some good therapeutists and others expert operators; and that what is expected of every man is that he will have sense to know, and the honesty to express himself when he does not know.

Dr. J. N. Nelms, Taylorville, said that in order to be successful the surgeon must necessarily be a skilled mechanic, and that this requirement should be exacted of him before he graduates. If he has not the aptitude of a surgeon, he should be the first to know it, and people soon learn whether a man is skilful or not in any department of medicine.

Dr. A. C. Corr, in closing, said that the essential feature of his paper was to elicit the opinions of members in regard to stopping, or at least restricting, what he designated as premature specialism.

### CHRONIC GASTRITIS.

Dr. James Brayshaw, Berlin, contributed a paper on this subject, and entered a protest against the use of the tube recommended by Hemmeter; for, although it is quite soft, it is provided with a sharp, chisel-like edge around the lower opening, for the purpose of loosening pieces of carcinomatous tissue, and such an instrument is dangerous in the hands of the average practitioner. Fermentation and dilatation, one or both, are usually present in chronic gastritis, but chronic gastritis is not always an accompaniment of the former conditions. In the treatment he recommended lavage, as it not only cleanses the stomach, but stimulates the muscularis. Another method of treatment is the use of abdominal massage; this may be carried out more or less perfectly with the hands, if one is a skilled masseur, or by rolling a metal ball over the abdomen. A method he has not seen recommended, but which has given excellent results in his hands as an adjuvant, is the interrupted and alternating galvanic current passed directly through the walls of the stomach.

### OUR MILK-SUPPLY; SOME OBSERVATIONS AT HOME AND ABROAD.

Dr. S. E. Munson, Springfield, in discussing this subject, considered the milk from the time of its delivery to the conditions influencing its protection. He said that it is absolutely essential to start with a healthy animal in order to have Nature's milk laboratory give us a supply of pure, wholesome milk. Such laws as we have already regulating disease in cattle should be rigidly enforced, and additional ones enacted. "Only the State can guard against the dirty milk, corrupted or polluted water-supply, impure ice, etc., and nothing but medical supervision will accomplish these objects, and there are no agents so effective as physicians to spread through all classes of the community the educational sense of sanitary decency."

Dr. Charles B. Reed, Chicago, mentioned the work of a legislative committee appointed to investigate the feeding of distillers' slops and brewery grain to cattle. It was found that cattle so fed were markedly tubercular to a greater degree than those that had been fed on so-called pasture food. It was likewise found that where the milk of these cattle was fed to infants and young children, there was a larger portion of infantile alimentary diseases.

Dr. Frank P. Norbury, Jacksonville, spoke of the satisfactory results obtained in investigating the condition of cattle from the tuberculin test, and pointed out the great necessity and importance of conducting these tests and examinations more extensively, and having them involve all herds from which the public secures its milk-supply.

Dr. W. H. Kirby, Chestnut, said that the value of the tuberculin test had been conclusively demonstrated, and that all physicians should give it their support.

Dr. E. H. Ochsner, Chicago, said that if physicians, through their influence, would make a demand for Pasteurized or pure milk from tested herds, dairymen would supply it.

Dr. Katherine Miller, Lincoln, pointed out the necessity of having the milk-cans thoroughly clean, as the source of contamination in many instances can be traced to them.

Dr. A. C. Corr, East St. Louis, said it is inconvenient and expensive for men who own small farms and have small herds of cattle to carry out some of the plans and tests mentioned.

### NEPHRITIS.

Dr. J. W. Kelly, Springfield, read a paper on this subject. He emphasized its prevalence, alluded to the reasons for this, and cited illustrations. He dwelt on the importance of an accurate and early diagnosis, and closed by reporting three instructive cases.

### IS PNEUMONIA CONTAGIOUS?

Dr. J. T. McAnaly, Carbondale, considered this question, and the following conclusions and inferences were drawn: 1. Pneumonia is an acute specific and mildly contagious disease produced by the micrococcus lanceolatus, involving the vesicular structure of the lungs in an exudate of greater or less extent, and is attended by the severe and often dangerous constitutional symptoms due to the toxins produced by the infecting micro-organism. 2. Isolation should always be recommended, and no two patients should occupy the same room at the same time. The aged and children, owing to the great mortality among them and to the enfeebled powers of resistance of the former, should be excluded from the sick-room. 3. The room should be large, and should be kept well ventilated, as pure air is very essential for a pneumonia patient. The danger of vitiated air should be constantly borne in mind, for it is a point to be doubly guarded because of its harmful effects on the patient, and of its dangers to the attendants. 4. The prompt and thorough disposal of all pneumonic sputa is important, for while it may be harmless to-day, it may be dangerous to-morrow. Prophylaxis is clearly one of the most important points to be considered. Since the true nature of pneumonia has been demonstrated by the bacteriologist, we may the more readily appreciate its dangers and guard against the septic possibilities resulting from pneumococcic invasions. 5. The rapid increase in our knowledge of bacteriology and the introduction of specific remedies afford ground for the hope that soon we may discover a treatment for this disease as certain and effective as that of antitoxin for diphtheria, or quinin for malaria.

### THE EVILS RESULTING FROM NAMING DISEASES FOR INDIVIDUALS.

Dr. N. S. Davis, Sr., Chicago, read a paper on this subject, bringing out the following points: 1. It is very inconvenient

2. It is meaningless, i. e., it conveys no information concerning the causes of location, nature or results of the disease. 3. It is unscientific. Disease is necessarily a *deviation from* the healthy condition of function or structure of some part of the whole of the living body; consequently its name should be suggestive of the nature, and, when possible, also of the chief seat of the disease.

Dr. **Harold N. Moyer**, Chicago, said that society owes thanks for this calling of attention to the vicious nomenclature of medicine, and that the time is almost ripe when organized medicine should take some action to abolish the method of naming diseases for individuals.

Dr. **John H. Hollister**, Chicago, emphasized the necessity of creating an urgent demand by the medical profession for greater simplicity of terms, so that they shall be self-explanatory. He expressed the hope that the profession would soon reach the termination of the creation of new names for drugs.

Dr. **A. C. Corr** said that physicians should keep in mind the physiologic action of drugs, in order to counteract the pathologic changes that take place and be able to meet the indications that are required in the treatment of the diseases which are recognized.

Dr. **T. J. Pitner**, Jacksonville, called attention to the fact that in the specific diseases, where we have a distinct bacillus which is recognized as characteristic of and causing the disease, it does not act alone, but is modified by other germs and other pathologic processes which must be considered. Examples were cited.

### DIAGNOSIS OF TUMORS OF SPINAL CORD AND ITS MEMBRANES.

Dr. **Frank P. Norbury**, Jacksonville, considered this subject and said that disturbed functions of the cord vary in intensity and kind, involving either it or its membranes, or both. But as symptoms of organic disease, and especially tumors affecting the cord or its membranes, are similar, it is necessary to study symptoms in common. Practical diagnosis recognizes the local sequence of symptoms and does not accept as disease, what, in many instances, are purely symptoms. When possible, differential diagnosis considers the pathogenesis of tumors. Defective function is seemingly not commensurate with existing lesions, and in some cases the reverse is true. Symptoms should be systematically considered, and the plan of Eskridge is a good one, viz.: irritation of the nerve-roots; meningeal symptoms; cord symptoms.

Irritation of the nerve-roots begins by changes in sensibility—pain, neuralgic in character; and neuralgia is apt to be the diagnosis. Sensory symptoms, usually unilateral at the beginning, become more pronounced as the neoplasm develops. Segmental diagnosis is of assistance here, as soon as local symptoms appear. Motor symptoms usually give the clue as to localization; numbness, hyperesthesia, and later anesthesia follow along the distribution of the nerves involved; and contracture, spasm and exaggerated reflexes of the extremities are noted.

In regard to meningeal symptoms there are no pronounced differentiating symptoms, except Kernig's sign and muscular rigidity, when the upper cervical region is involved.

The cord symptoms are those of gradual compression of the cord, viz., motor and sensory paralysis, spastic symptoms, vasomotor, trophic and reflex changes, and differential diagnosis as to intradural, intramedullary location requires careful investigation.

The vasomotor and trophic symptoms are sweating, unilateral and profuse; occasional deep capillary flushings, herpetic skin eruptions; bed-sores, and change in the skin and nails.

As to differential diagnosis, caries is to be noted, the great point being the history or presence of tuberculous infection elsewhere. This is suspected in young persons, and especially when there is a clinical history suspicious of tuberculosis. The pain, tenderness, deformity, muscular rigidity, are also points in differentiations. Carcinoma is also to be considered—the history of removal of malignant growth. A case was mentioned with constant bilateral sciatica present; and lumbar carcinoma found after death; also some deformity, etc. Cervico-occipital neuralgia, myelitis, syringomyelia, spinal syphilitic tumor are also to be considered in differentiation.

The observations and conclusions were derived from the study of three cases: One of tuberculous tumor, intramedullary, cervical region; one of sarcomatous, dorsal region, extradural; one of carcinoma, extradural, lumbar region. Postmortem findings confirmed the diagnosis in two cases.

Dr. **Hugh T. Patrick**, Chicago, said that the differential diagnosis of spinal cord tumor due to syphilis, as the gumma, had been omitted. He had seen several cases of spinal cord syphilis in Chicago.

Dr. **Archibald Church**, Chicago, said that he had seen four cases of tumor of the spinal cord, and that the most distinctive symptoms in all had been those of sensation. He regards it as exceedingly difficult to diagnose tumor of the spinal cord, and considers this largely tentative, unless confirmed either by surgical intervention or post-mortem examination. He related a case that had been operated on by Dr. Fenger, where the tumor seriously invaded the cord and produced a destructive myelitis.

Dr. **Frank P. Norbury**, in closing, said the three cases reported by him had come under his observation during the last twelve years; and tumor of the spinal cord is a comparatively rare affection, there being only some 220 cases found in medical literature.

### CALIFORNIA AS A HEALTH RESORT.

Dr. **J. H. Hollister**, Chicago, in a paper on this subject, considered: persons to be benefited; the locations suited to their various needs; and the proper care of such individuals. No climate in and of itself is curative, but the power for recovery must be inherent with the patient, as the environments at best are only helpful. With certain recuperative powers in the individual, the conditions which may best promote recovery are: a dry soil, with freedom from soil exhalations; a mild atmosphere, pure in quality and nearly uniform in temperature; exposure, with personal comfort, to continuous days of sunshine; wisely directed daily physical exercise; the residence isolated from crowded apartments, with good ventilation, proper drainage, and plenty of sunlight exposure; a liberal bill of fare, well selected and properly cooked; pleasant social relations and diverting pastimes. These are the ideal factors which promise most of helpfulness, so that in no single locality can one expect to unite them all, but such ideal conditions may be more nearly approximated in California than in any location with which we are familiar.

### EVERY-DAY HEADACHES.

Dr. **Hugh T. Patrick**, Chicago, read a paper on this subject. He said that every-day headaches are those of eye-strain, migraine, neurasthenia, infection and intoxication—fever, constipation, indigestion, alcohol, etc. Those from migraine and neurasthenia are incomparably the most frequent, but the headache of the latter is not really a head pain, but nearly always a cephalic distress. The peculiarities, causes, and treatment were considered and several illustrative cases cited. Migraine, if not the most frequent headache, is the most often misunderstood, and its prevalence, nature, cause, peculiarities and variations were discussed; the diagnosis and treatment given, also illustrative cases narrated.

### DO WE HAVE SMALLPOX?

Dr. **H. C. Mitchell**, Carbondale, discussed this question, now that we have an epidemic of smallpox, so mild in character that its fatality is almost *nil;* when such a state of affairs exists, we can rest assured that the diagnosis of smallpox will be questioned by the average physician and laity. The doubt manifested as to the diagnosis of the present epidemic is not because the symptoms are not identical with those of former epidemics, but because of its mildness and low fatality. The mildness of the disease can not be due to its having originated in a tropical country, because it has been clearly shown that in Cuba, where it is supposed to have started, the death-rate was relatively large. It can not be due to climatic conditions in our own country, because the disease prevails in the same mild type both North and South. He believes that this explanation may be offered: The disease is produced by several germs which differ as to the character of their virulency; for example, the pus-producing ones—streptococci and staphylococci. Or that it might be explained on the hypothesis that smallpox, like measles, diphtheria, scarlet fever and similar diseases, often appears in mild form. This may not be a satisfactory explanation, because in these diseases, when they appear in their mildest forms, there will occasionally be some malignant cases and deaths, while in this instance we have a more fatal disease than any of the others mentioned that has been running for three years with practically no death-rate.

### TREATMENT OF THE OPIUM HABIT BY THE BROMID METHOD.

Dr. Archibald Church, Chicago, read a paper on this subject, and said that in the *British Medical Journal*, July 10, 1897, Dr. N. Macleod, of Shanghai, reported seven cases which he had treated by what he called the "bromid sleep." Briefly, the purpose of this treatment is to stupefy the patient utterly for a number of days, during which time the opium is rapidly withdrawn, with also recovery from the physical disturbance secondary to its withdrawal. Macleod states that early in 1897 a neurasthenic woman, addicted to the use of morphin for nine years, by accident, had administered to her 2½ oz. of sodium bromid in something over two days. A profound sleep was induced, lasting several days, and when its effect wore off the craving for morphin had ceased and with it the various disturbances which had led to its use. A few months afterward a pilot, who was addicted to morphin and alcohol, agreed to try the effect of the treatment; no suffering was experienced during the withdrawal of the morphin, craving for which, as well as for alcoholics, disappeared on recovery from the bromid sleep.

He also gave the histories of two other cases treated by the Macleod method: in the first, the result was excellent; the second, which might have been a successful result, so far as the bromid treatment was concerned, terminated fatally, perhaps by the bromid aggravating a nephritis. The method of administration, which has been gradually developed as the result of the experience of Macleod and his own observations, was formulated thus: The drug should be given only in the daytime; 120 grains of sodium bromid in a half tumbler of water, every two hours, until an ounce is given in the same way, and this may be sufficient, or it may be necessary to continue the doses in the same way on the third day. Macleod says a safe rule is to cease the administration of the bromid after twenty-four hours, when drowsiness is so profound that the patient can not be aroused, or when aroused is incoherent. If the sleep continues or becomes deeper, no more bromid will be needed. It is to be remembered that the bromid acts in a cumulative manner. After the second or third day, when the bromid is withdrawn, the drowsiness, in some cases actually coma, tends distinctly to deepen for forty-eight hours, so that the fully-developed sleep presents a rather alarming condition to any one not familiar with it. For two or three days there is difficulty in feeding the patient, and swallowing is sometimes impossible, so that rectal alimentation is required. During this treatment, there is apparently a tendency to aspiration pneumonia, so that feeding by the mouth becomes doubly dangerous. Any septic condition in the pharynx or in the antra communicating with the mouth should contraindicate the treatment. The poisonous effect of the bromid apparently falls on the respiratory and cardiac centers, so that a weak heart or impaired pulmonary conditions would furnish reasons against the method. From the case of nephritis, that he had reported as terminating fatally, it is strongly suggested that bromid of sodium in large quantities acts harmfully upon the kidneys, if they are diseased, and therefore any degree of nephritis should be a contraindication to this line of treatment. Three deaths occurring in twelve cases, although in each instance attributable only remotely to the bromids, and occurring where it had been used in extraordinary doses—doses that can no longer be advised—show that the plan of treatment is very far from being simple and without danger. However, as compared with the difficulties of the ordinary methods that are pursued in correcting the addiction to morphin, it seems to be of very definite value in well-selected cases; and can then be used without hesitation, under appropriate safeguards.

*(To be continued.)*

## Association of American Physicians.

*Twenty-sixth Annual Meeting, Washington, D. C., May 1-3, 1900.*

President, Dr. E. G. Janeway.

### ACID INTOXICATION.

Dr. C. A. Herter, New York City, in a paper on "Experimental and Clinical Study of Acid Intoxication," referred especially to the presence of oxalic acid and oxalates in the urine, and said that animals kept on a mixed diet have 67 mg. of oxalates in twenty-four hours' urine, while those on a diet of milk are free from oxalates; and that dogs fed on a sugar diet in the course of a few weeks are taken with intermittent diarrhea and gastric disturbances, with oxalates in their urine, and that all this goes to show that the oxalates are formed within the body. He concludes that this is done in the stomach and that it is probably due to an organized ferment.

### DIABETES.

Dr. J. B. Herrick, Chicago, presented a paper on this subject and spoke of the low specific gravity of the urine in some cases, it being influenced by the large amounts of fluids taken. He has had cases with specific gravity as low as 1004, and has found albumin and casts not uncommon in diabetic urine, the latter being unusually abundant preceding coma.

### URIC ACID AND EPILEPTIC ATTACKS.

Drs. James J. Putnam and F. Pfaff, Boston, presented a paper entitled "Communication on the Relation of Uric Acid Secretion to Epileptic Attacks," and said that there is no difference in the amount of uric acid secreted during or between the paroxysms.

### CASE OF ACUTE ASCENDING PARALYSIS, SHOWING HEMATOPORPHYRINURIA.

Dr. Chas. G. Stockton, Buffalo, N. Y., read a paper on this subject, in which he reviewed the history of a case of this quite fully. He said that the claret-colored urine was not due to any of the indican bodies, for they were absent, but that there was a relationship of the pigment to the inflamed condition of the spinal cord.

### INFREQUENCY OF TRANSMISSIBLE DISEASES IN CHILDHOOD.

Dr. A. C. Abbott, Philadelphia, presented a paper on the "Relative Infrequency of Acute Transmissible Diseases During the First Year of Childhood; with a Discussion of the Probable Reason for the Same." By means of a number of statistical charts, he was able to show that acute infections, especially of measles and scarlatina, are relatively rare in children under one year of age, and very rare in those less than six months old. He thinks that this immunity is due to the mother's milk.

### RECURRENT VOMITING IN CHILDREN.

Dr. J. P. C. Griffith, Philadelphia, in a paper on this subject reviewed the histories of four cases, and said that recurrent vomiting, often called cycle vomiting, is too little discussed. Of the cases under consideration, the third and fourth were fatal; the first, mild, and the second, very severe, but recovery took place. The symptoms were as follows: vomiting almost incessant, with obstinate constipation, not relieved when the bowels were opened; exhaustion marked, but no abdominal pain; they appeared to be at the point of death, but quickly recovered.

Dr. Chas. G. Stockton said that the character of the vomit had not been given and that in his cases it was pure gastric juice.

Dr. Johnson, Washington, D. C., had a case in which the vomit was like coffee grounds.

### PULMONARY TUBERCULOSIS.

Dr. E. L. Trudeau, Saranae Lake, N. Y., presented a paper entitled "Sanitarium Treatment of Pulmonary Tuberculosis and Its Results," in which he spoke of the advantages of the sanitarium treatment over the old routines, and mentioned as especially necessary: good climate, well-regulated open-air life, proper food and care in regard to daily habits. He said that the incipient stage of pulmonary tuberculosis is not generally recognized; and that the X-ray, together with the tuberculin test, are valuable in aiding to make a diagnosis.

Dr. Norman Bridge, Los Angeles, said that three-quarters of his cases were managed best by treatment outside of the sanitarium.

Dr. Francis Kinnicut, New York City, reported a case of phlegmonous gastritis and exhibited some specimens.

### ORGANISM AND LESIONS OF ACTINOMYCOSIS.

Dr. J. H. Wright, Boston, considered this subject, and said that this disease goes frequently unrecognized, and it is much more common than one would suppose. He considers it a subacute or chronic process, and spoke of the difficulty in making cultures of these organisms; he showed a number of specimens by lantern slides and said that it was not necessary to stain a fresh specimen of one of the rays in order to make a diagnosis.

### SPOROTHRIX.

Dr. L. Hektoen, Chicago, read a paper entitled "A New Pathogenic Fungus" (Sporothrix), which was first described by Schenck, and gave the history of a patient who was inoculated with this new organism by a punctured wound of the fingers, due to an iron nail, and said that several different cultures produced the same organism.

### PERNICIOUS ANEMIA.

Dr. Richard C. Cabot, Boston, presented a clinical study of 110 cases; and in speaking of its etiology said that the disease is more common in males, that late middle life is predisposed to it, and that the menopause bears no relationship to the disease. The symptoms are relatively constant in all of his cases, viz., hemorrhage of the nose and mucous membranes, muscular weakness, shortness of breath, gastrointestinal irritation, which is paroxysmal, some slight fever, about 99 F., frequent myelitis together with the blood changes. He thinks that treatment is hopeless, that the average duration of the disease is from two to three years.

### BLOOD FINDINGS IN PERNICIOUS ANEMIA.

Dr. Frank Billings, Chicago, read a paper entitled "Report of Cases of Pernicious Anemia with Special Reference to the Blood Findings." He showed some very interesting charts that illustrated the rise and fall of the polichromatophiles and the nucleated red corpuscles, together with the color-index, and brought out their relationship to the periods of improvement and decline. He spoke also of the increased number of eosinophiles accompanying apparent improvement.

### NOTES ON CASES OF PERNICIOUS ANEMIA.

Dr. F. P. Henry, Philadelphia, reported five cases, three of which had autopsies; some had paralysis of the extensor muscles of the extremities, though this is rather uncommon. His theory is that in this the blood of man reverts to that of the cold-blooded animals.

Dr. H. A. Hare, Philadelphia, said that he thinks a great many changes in the form of the blood-corpuscles takes place in health, and suggested work in this line, because we know more about the pathology of blood than about its normal changes.

Dr. Wm. H. Thomson, New York City, spoke of Hunter's theory of pernicious anemia, which makes it due to suppuration at the roots of the teeth.

Dr. W. H. Thayer, Baltimore, Md., said that he thinks that a diagnosis could not be made by the blood count alone.

Dr. DaCosta said that the length of remissions is often as long as eight and ten months.

### STRONGYLUS INTESTINALIS.

Dr. W. S. Thayer, Baltimore, Md., gave a report of "Two Cases of Diarrhea Associated with the Presence of Strongylus Intestinalis in the Stools," and said that the character of the diarrhea was interesting inasmuch as it was never painful, and appeared to be the first described in the United States.

### FILARIA.

Dr. W. T. Councilman, Boston, read the report of a case of filaria and showed specimens of the adult parasite. The patient, who was a native of Barbados, had several live adult filaria in his left testicle and also in the blood.

### THE ELIMINATION OF DELETERIOUS SUBSTANCES FROM ANTITOXIC SERA.

Dr. W. H. Park, New York City, read a paper on this subject, in which he said that antitoxins are of the nature of globulins, because they give the same clinical reactions, and when there is an increase in the number of toxins in the blood there is also in the globulins. He spoke of the deleterious effects that the sera of certain animals have on the individual and suggested that only those animals be used which by experiment have been found not injurious.

### VARIETIES OF DIPHTHERIA BACILLUS.

Drs. F. F. Westbrook, Wilson and McDaniel, Minneapolis, Minn., presented a paper on this subject. Dr. Westbrook illustrated with several water-colored charts, and divided the diphtheria bacilli into three groups, viz., granular forms, barred forms and solid color forms, and said that some of them are able to change their shape through morphological development.

### ADDISON'S DISEASE.

Dr. W. W. Johnston, Washington, D. C., presented a case of Addison's disease that has been under treatment with suprarenal extract. The patient has shown a marked improvement by an increase in weight, though this is due as much to rest as to the treatment.

### VENOUS THROMBOSIS AS A COMPLICATION OF CARDIAC DISEASE.

Dr. Wm. H. Welch, Baltimore, Md., considered this subject and reported four cases. Cultures taken from the thrombus after death were infected, while cultures from other parts of the body were not. He reviewed the literature of twenty-three cases.

### CIRRHOSIS OF LIVER.

Dr. Simon Flexner, Philadelphia, presented a paper entitled "The Nature of the New Tissue in Cirrhosis of the Liver and Its Distribution." He said that the pathology is not well understood, but that the introduction of special stains has made the study of elastic tissue possible; and that in studying the distribution of the elastic tissue, staining has been combined with a process of digestion and in this way he has been able to separate some of the different kinds of connective tissue.

### MULTILOCULAR CYSTOMA OF PANCREAS.

Dr. R. H. Fitz, Boston reported a case in which the cysts were successfully removed by operation, and the patient recovered.

### DEGENERATED ECHINOCOCCUS CYSTS OF PLEURA.

Dr. Chas. Cary, Buffalo, N. Y., presented a paper on this subject and told of a patient who had never been out of the United States.

### MINOR FORMS OF CARDIAC DILATATION.

Dr. Beverly Robinson, New York City, discussed this subject and spoke of three types in which the disease is found, viz., the young anemic girl, the fat woman, and the nervous woman about the age of 40.

### GRAVES' DISEASE WITHOUT EXOPHTHALMIC GOITER.

Dr. Wm. H. Thomson, New York City, read a paper on this subject and said that it is a distinct disease, not an undeveloped exophthalmic goiter; that tachycardia is the first symptom to appear and the last to disappear; and that there were often sensory and motor disturbances. He spoke also of the gastric disturbances and said that he believed the disease to be of a gastrointestinal origin.

### PERICHONDRITIS OF LARYNX.

Dr. M. H. Fussell, Philadelphia, discussed this subject and exhibited a patient and a specimen. He said that only 7 per cent. of cases of typhoid fever are thus affected.

### APPENDICITIS AND TYPHOID FEVER.

Dr. H. A. Hare, Philadelphia, read a paper entitled "The Attitude of the Physician and Surgeon to Appendicular Symptoms, Complicating Typhoid Fever," and cited cases that he has had simulating appendicitis, which after twenty-four hours became typical typhoid fever.

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**Southern Medical Association.**—This Association met in Sparta, Ill., May 11 and 12. The following officers were elected for the ensuing year: president, F. T. Grinstead, Cairo; first vice-president, H. L. Gault, Sparta; second vice-president, A. A. Dean, Campbell Hill; secretary, A. B. Ormsby, Murphyboro; assistant secretary, Emmett Bottom, Murphyboro; treasurer, A. Tilford, Menard.

## American Gynecological Society.

*Twenty-fifth Annual Meeting, Washington, D. C., May 1-3, 1900.*

President Dr. George J. Englemann, of Boston, in the chair.

### OPERATION FOR PRIMARY VAGINAL CARCINOMA.

Dr. William R. Pryor, New York City, read a paper on "Operation for Primary Vaginal Carcinoma, Applicable also to Cancer of the Rectum in Women," in which he mentioned the fact that cancer of the vagina is very rare, involving usually its posterior wall, and extending underneath the rectum, then to the vaginal structures and to the uterus. He described the operation as performed by him in two cases, where he removed all the organs in which recurrence was apt to take place, and worked from above downward. The steps being: 1. The general preparation of the patient. 2. The incision from the umbilicus to the pubes. 3. The ligation of the vessels and ligaments. 4. Dissection of the bladder from the cervix and entrance to the vagina *anteriorly*. 5. Removal of the vagina and the entire rectum. 6. Ligation of the obturator artery to prevent anastomotic circulation being formed.

The technique of the operation was illustrated by drawings.

Dr. Paul F. Mundé considers it fortunate that these cases are rare; he has never seen but two, and says that he has curetted and cauterized, but does not think that radical work repays for the slight benefit received.

Dr. R. S. Sutton, Pittsburg, Pa., had seen but one case in thirty-four years, and does not favor radical operations. He thinks that the pathology of cancer should engage our attention instead of a new method for its removal.

Dr. E. Van De Warker thinks that nothing has been gained by operations for cancer.

Dr. E. E. Montgomery, Philadelphia, believes that the great frequency of recurrence of malignant disease, where it involves the vagina, and extends into the parametrial tissue and the broad ligament, makes questionable the operative treatment. He has seen patients in whom he felt that an operative procedure would result favorably, but in whom there was an early return of the disease, while in other cases of *extensive destruction of the cervix*, the patients lived several years without recurrence.

### FECAL FISTULA.

Dr. I. S. Stone, Washington, D. C., read a paper on this subject. He regards fecal fistulæ one of the most distressing and annoying of post-operative sequelæ, and thinks that possibly the larger number of them follow in the wake of appendiceal abscess, and that there can be no routine treatment. Mention was made of certain methods that he believes are followed by the best results, for instance in cases in which the cecum and ascending colon are greatly thickened and firmly bound by adhesions, a section of the ilium may be taken as near the caput coli as convenient and transplanted, or an end-to-side anastomosis may be made to the transverse colon. He gave his successful experience in two cases of recto-abdominal fecal fistulæ of long standing. In all of these that are persistent any foreign body must be removed, and all attempts at skin closure, by cauterization or by curettement are generally successful; and in all cases where a fistula connects with the superficial coil of intestine, the method of Greig Smith may be tried before resorting to radical operation. Recto-abdominal fistulæ should, if possible, be converted into recto-vaginal fistulæ, and closure of the tract secured before temporary fistulæ are allowed to close.

Dr. A. F. Currier, New York City, has seen but one case of fistulæ of the small intestine and this was finally cured by section of the small bowel. He believes that in these cases, including the small intestine, it is not wise to wait, and in those situated low down, he does not advocate hasty operative procedures, having seen a number of cases where by waiting, Nature instituted a cure.

Dr. C. P. Noble, Philadelphia, has seen a number of fecal fistulæ, all but four of which closed spontaneously, three remained obstinately open, and one recovered after operation.

Dr. A. P. Dudley, New York City, said that in operating for cancer and in breaking up the adhesions, he has broken the small intestine in two and put in a Murphy button, that was afterward recovered, having worked down to the rectum, and out through the fistula behind the uterus. Although he had expected the woman to die, the fistula healed and she recovered.

Dr. P. F. Mundé referred to three cases of fistulæ resulting from the intentional opening of the intestines in order to relieve an obstruction to the bowels that was tending to general peritonitis following some abdominal operation. He agreed with Dr. Currier that in fistula in the small intestine it is well to wait, but in the same condition in the large bowel, the abdomen should be opened.

Dr. M. D. Mann believes that we are almost always obliged to open the abdomen in fistula of the small intestine, and that further treatment will depend on the opening; if it is close to the mesentery it will be dangerous to sew it, and if large it should not be sewed for fear of stricture.

Dr. I. S. Stone, in closing, said that the Society seems agreed as to the danger of opening the abdomen in these conditions, and that it should be done only after every superficial method has been employed.

Dr. W. L. Burrage, Boston, reported 137 operations which were performed on diseased uterine appendages, with the object of preserving one ovary, or portion or portions of one or both ovaries with their tubes, or as much of the tubes as was reasonably normal in appearance. He gave the results in 85 of these, the table being divided into the more severe and the less severe. By comparison it was found that in the majority of the former gonorrhea and syphilis were more prevalent, that the symptoms had resulted more frequently from difficult labors, or abortions, and that the tubes were closed; whereas they were open in all but one of the less severe. Pregnancy followed operation in four of the more severe, and in 11 of the less severe. Anatomical cure was reported in 33 out of 57 cases, and symptomatic cure *in 60 out of 85. In women of both classes,* who have borne children, subsequent pregnancy may be expected in 35 per cent., whereas in previously sterile women, it may be looked for in only 5 per cent.

Dr. A. P. Dudley said that in a case of double pysoalpinx he had taken the tube off and left the ovary hanging, then brought the uterus up and split the fundus in two; and he was absolutely sure that the ovary had grafted, and that the patient is now menstruating every twenty-eight days. He had had five cases in all, in which, not being able to save any of the tubes, he had planted the ovary, and in all he was sure it had *grafted, as every portion* of the discharging stricture had been analyzed.

Dr. H. N. Vineberg, New York City, said that the class of cases in his hands, which had given the poorest results had been those in which the lesions had not been very severe.

Dr. M. D. Mann, Buffalo, N. Y., mentioned *a case in which* one tube and ovary were entirely removed, and the others were in bad condition. The tube was opened, and after breaking up the adhesions, left, together with the ovary. Four children have since been born, three girls and one boy. This is interesting in the matter of sex in regard to one ovary.

Dr. J. Riddle Goffe said that he was approaching his one hundredth case of conservative work on appendages, which had been very largely through the vaginal, *rather than* the abdominal, incision.

Dr. W. L. Burrage, in closing the discussion, said that he has operated twice in cases where there was no symptomatic and anatomical cure, and that there were several other cases, where operation was needed but the patients would not submit and he had used the cautery. He has had in his experience pronounced neurasthenia in patients past the age of 35 years, and in those cases either *complete removal* or no operation is indicated, as they do not do well after resections.

### INTERNAL SECRETION OF OVARY.

Dr. A. W. Johnstone, Cincinnati, *Ohio, in a paper on this* subject, said that retained secretions are the cause of nearly all conditions. For if it is a lack of an internal secretion that causes the nervous menstruation disturbances of the menopause, why is it that delayed menstruation in a child-bearing woman will produce identically the same symptoms as those of the menopause? This is apparent to all in our every-day work, and has occurred so often that he believes that if a woman's menstruation is delayed for any reason except pregnancy, she is apt to have symptoms closely approximating those of the change of life. This leads him to believe that the internal secretion of the ovary is a myth.

### THE TECHNIQUE, INDICATIONS AND ULTIMATE RESULTS OF SUTURING THE ROUND LIGAMENTS TO THE VAGINAL WALL FOR RETROVERSIONS AND FLEXIONS OF THE UTERUS.

**Dr. Hiram N. Vineberg**, New York City, described in detail the technique because he felt that the method was not correctly understood. The patient is prepared as she would be for a vaginal hysterectomy, and when the uterus is unusually large and heavy, or the utero-rectal ligaments are put on high tension by anteverting the uterus, it is wise to employ a single uterine fixation suture in addition to the round ligament sutures. To avoid the possibility of dystocia in the event of pregnancy this should not be placed too high up on the uterine wall. Any operation on the cervix that may be called for is now done. and the posterior vaginal wall or perineum subjected to any plastic operation that may be deemed necessary. The patient is kept in bed for twelve days, when the round ligament sutures may be removed and also the uterine sutures, if they are present.

In 64 per cent. some surgical work on the adnexa was found necessary. In 53 consecutive cases the results show no mortality; in 48 cases convalescence was uneventful, and in only 1 was there absolute failure, the uterus being found in retro version six weeks after the operation.

**Dr. A. F. Currier** said that fixation can be done through the abdomen, and his plan is to limit the operation to those cases in which a later one is necessary.

**Dr. R. S. Sutton** hopes that soon the abdomen will not be opened as often as it is now, and that pelvic diseases may be attacked almost exclusively by the vaginal route.

**Dr. J. W. Bovée** considers that the Alexander operation possesses an advantage over the shortening, inasmuch as it does not require the opening of the peritoneal cavity.

**Dr. J. Riddle Goffe** expressed the belief that we will not have to wait long until all pelvic work will be done through the vagina. He believes that laparotomy is not justifiable until it is found impossible to relieve the patient by a vaginal incision. In only one case within the last few years has he been compelled to resort to laparotomy to complete the work.

**Dr. Hiram N. Vineberg** thought that the cases may require to be selected for the vaginal route, and that some are best approached from the abdomen.

### PREGNANCY IN LABOR.

**Dr. J. Clarence Webster**, Chicago, offered for inspection some casts illustrating the anatomy of pregnancy in labor, also models used in gynecologic teaching. Many clinical observations made by him in regard to the topography of pregnancy had been reproduced in frozen sections.

**Dr. Buckmaster** spoke of a method of reproducing the process of an operation by paraffin.

### ANASTOMOSIS OF URETERS WITH INTESTINES.

**Dr. Reuben Peterson**, Chicago, considered this subject and gave a historical and experimental research. He presented first an exhaustive review of the literature, then a description of his experiments, from which, together with the work of others, general conclusions were drawn. The most striking fact is the exceptionally high mortality attending the operations; out of 60 dogs operated on by the various experimenters, where one ureter was implanted in the intestine, there was a mortality of 61 per cent.; out of 65 dogs undergoing bilateral ureteral anastomosis, there was a mortality of 87 per cent. The majority of the deaths resulted from peritonitis. The method which calls for the least amount of suturing of the ureter itself is found to give the best results. He gave a short abstract of the 28 uretero-intestinal anastomoses in man, showing that the primary mortality of 32 per cent. is high.

### EVOLUTION OF TECHNIQUE IN TREATMENT OF FIBROID UTERINE TUMORS.

**Dr. H. A. Kelly**, Baltimore, Md., in this paper referred to his method of controlling the uterine vessels, which he considers a remarkable advance on any that has preceded. He briefly detailed his method of dealing with very difficult cases, such as large adhering tumors, and gave the following ways of dealing with them: by median saggital bisection of the uterus with the tumor; by a corona bisection of the uterus with its cervical portion; by a bisection of the tumor alone. The principle of the operation is the same in all cases. The best method of enucleation is to seek at first to isolate and ligate the ovarian vessels of one side and to expose the uterine vessels, then cut across the cervix, clamp the opposite uterine artery and the round ligament, and lastly, the ovarian vessels.

### GYNECOLOGY IN THE LAST QUARTER OF A CENTURY.

**Dr. George J. Englemann**, Boston, in his presidential address, gave a historical review of the various periods in gynecology in the last quarter of a century. The trend of modern medicine is toward research for cause and prevention, and the main cause of suffering is found on the great waves of a woman's life—puberty, menstruation, labor, and the menopause.

### INTRA-ABDOMINAL AMPUTATION OF THE UTERUS; A MODIFICATION OF HYSTERECTOMY.

**Dr. F. H. Davenport**, Boston, in a paper on this subject, stated that the indications for hysterectomy are quite well established, and that interest is now centered on the technique. In a young married woman, whenever possible, he prefers to leave the cervix, and for suitable cases, chooses the abdominal route; he operates by the vagina for cancer, either of the cervix or body. The essential feature in which his method differs from that usually employed is that the uterine arteries are not ligated.

### KELLY'S METHOD OF REMOVING THE FIBROID UTERUS VIA ABDOMEN.

**Dr. A. Lapthorn Smith**, in speaking on this subject, said that the advantage of Kelly's method lies in the fact that the operation is commenced on the easy side, and after securely tying the ovarian, round ligament and uterine arteries, and separating the bladder, we cut across the cervix and roll the tumor out, thus obtaining plenty of room to tie the arteries from below upward. Another great advantage is that there is much less danger of injuring the ureters. He lays even greater stress than does Kelly on the importance of feeling for each individual artery, and tying it before cutting it, and then putting on a second ligature. He strongly advises the use of chromicized catgut, and just as firmly opposes leaving the ovaries and tubes and myomectomy, and he holds the opinion that all fibroid uteri should be removed as soon as discovered, because a woman with a fibroid is liable not only to hemorrhage, but to reflex disturbances of digestion and circulation. He objects to a preliminary curetting, because it is unnecessary, and when done is seldom effectual, and also to vaginal morcellement which is not to be compared with Kelly's method.

He strongly advises the closure of the abdomen with through-and-through silkworm gut sutures, left in for three or four weeks, for then, if not tied too tightly, and redressed with boracic acid in abundance, the one dressing, or at most two, will suffice.

### BRONCHIAL DISEASE AND ETHER ANESTHESIA IN ABDOMINAL SURGERY.

**Dr. Thaddeus A. Reamy** does not think that bronchial disease is invariably a contraindication for anesthesia in abdominal surgery. He said that his personal experience with surgical anesthesia covered 8000 cases; his obstetrical work, 3000 deliveries; and that 2000 of these were under chloroform anesthesia. Although he much prefers ether, he has never lost a patient under either ether or chloroform. He mentioned as the proper conditions in the administration of both, the preparation of the patient; the temperature of 98 to 100 F. in the operating room, where the anesthetic should be administered; the placing of the chest and trunk of patient lower than the pelvis; and of the pure quality of the ether, and the inhaler that must permit of the reinhalation of the vapor, no more to be used unless the operation lasts more than forty minutes. He has witnessed but one case in which pneumonia was probably induced by ether inhalations, but has seen bronchitis, both acute and chronic at once cured as a result. He would not employ ether in the presence of emphysema.

Dr. Malcom McLean emphasized the importance of the high temperature of the room and spoke against any confusion that would make it necessary for more ether than would otherwise be required.

Dr. T. A. Reamy regards conversation in the room of great disadvantage. His rule is to allow no one to speak until the patient is unconscious. He emphasizes the fact that the room must be hot and the ether given in the operating room.

### RELATIONSHIP BETWEEN DYSMENORRHEA AND APPENDICITIS.

Dr. Archibald McLaren, of St. Paul, Minn., considered the influence of pelvic and inflammatory conditions on menstruation. In 200 laparotomies, he had 158 cases where inflammatory appendages had to be removed and in 40 per cent. the appendix showed evidence for removal, but does not advocate doing so always. The technique of his earlier operations was given; in later years he has adopted the method of Kelly.

Dr. A. J. C. Skene said that the relation of appendicitis to dysmenorrhea was a new idea to him, and explained certain observations for which he had previously been unable to account.

Dr. A. Lapthorn Smith's experience coincides with that of Dr. McLaren. He had often been called in consultation with two doctors, one being of the opinion that the condition was salpingitis, and the other appendicitis; and since he has had more experience he agrees with both.

### PELVIC ASYMMETRY.

Dr. Philander A. Harris, Paterson, N. J., demonstrated the utility of a certain chart for the determination of pelvic asymmetry by a very simple method of external pelvimetry. He exhibited the instrument and urged a more frequent use of the pelvimeter, and also showed photographs illustrating the advantages of employing a certain background in the photography of pathologic specimens.

The officers for 1900 are: president, E. Van de Warker; vice-presidents, Charles Jewett and R. B. Maury; secretary, J. Riddle Goffe; treasurer, J. Montgomery Baldy. Chicago was selected as the next place of meeting.

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## German Congress of Internal Medicine.

*Wiesbaden, April 21, 1900.*

### ENDOCARDITIS.

The two principal subjects discussed: "Treatment of Pneumonia" and "Endocarditis," were ably handled by Koranyi, Pel and Litten, bnt nothing new was presented except Litten's classification of endocarditis. He rejected the anatomic divisions: verrucose, ulcerative, etc., as endocarditis may occur and kill before vegetations or ulcerations have appeared, and they are not characteristic of any clinical manifestation. He proposes a classification based on the clinical evolution and the degree of virulence of the micro-organisms, distinguishing three varieties: the benign, the malignant nonpurulent, and the malignant septicopyemic. Benign endocarditis occurs in the course of an infectious disease: rheumatism, chorea, gonnorrhea, purpura, typhoid or the eruptive fevers, diphtheria, pneumonia or tuberculosis, or it may be of ex-influenza or traumatic. It is not a morbid entity but merely a localization of the infective process. The anatomic manifestations may be verrucose or ulcerative, and there are usually metastases, which may be simple bland infarcts, or suppurative emboli in consequence of the participation of pyogenic micro-organisms. If the agents of the infection are unusually virulent they may induce the second variety, malignant nonpurulent endocarditis, which is generally fatal, while the benign terminates in recovery. The third variety, malignant septicopyemic endocarditis, is merely one manifestation of the general invasion of the organism. Traumatic endocarditis may develop sooner or later after a trauma, even without external manifestations of injury to the thorax, and may remain benign and heal, or may lead to chronic valvular defect. It is also liable to become complicated with secondary pyogenic infection and assume the malignant septicopyemic form. Wassermann believes that any kind of bacterium settling on the endocardium may induce endocarditis, and that the benign or malignant character is not due to the virulence of the germ, but rather to finer biologic processes such as Ehrlich has demonstrated in his research on the hemolysins. His, of Leipsic, reported observations in which acute gonorrhea had an aggravating effect on pre-existing valvular affections. Jurgenssen asserted that the share of the myocardium in the cardiac complications of infectious diseases has been underestimated, and remarked that the character of acute articular rheumatism has altered in his experience of late years. There is less fever and swelling of the joints. and the pains extend through the diaphyses. The course is more insidious; the functional disturbances of the heart occur earlier and more frequently; respiration is accelerated and he has observed nervous phenomena, choreic, cataleptic or reflex.

### EXPECTORANTS.

In discussing expectorants, Naunyn recommended potassium iodid in pneumonia and rebellious bronchitis with certain limitations, and Senator reported extremely favorable results from the use of hot water, which he administers in bronchitis and rebellious catarrh in the form of hot alkaline mineral waters.

### *CARCINOMA OF ALIMENTARY CANAL.*

Boas reported that he had become convinced from his study of two hundred cases of this affection that the influence of heredity is much overrated. On the other hand, his belief in the noncontagious character of carcinoma has been rudely shaken by twenty-two observations on its occurrence in persons living together. He proclaimed the necessity of prophylactic measures, especially in regard to the dejecta of carcinomatous subjects, and articles they have used, dishes, toilet articles, etc. Meat-eaters predominate in his experience, but vegetarians are quite frequently affected. Alcoholic antecedents were noted in 40 per cent. of his observations. Traumatism, he adds, may unmistakably favor or arouse carcinoma of the alimentary canal, and likewise phthisis, diabetes, and syphilis.

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## New York County Medical Association.

### CONTINUATION OF DISCUSSION ON DR. HOWARD KELLY'S PAPER ON "THE PRESENT STATUS OF OPERATIONS FOR CANCEROUS UTERI."

*(Concluded from p. 1220.)*

Dr. H. J. Boldt, New York City—When your president requested me four months ago to take part in the discussion of Dr. Kelly's paper, I accepted with pleasure, not because I thought that I would be able to add to the value of the discourse, so far as treatment was concerned, because I knew that what the gentleman would speak about would be thoroughly weighed and studied, to enable him to contribute something of real value to the profession, but as I desired to add my opinion, based on the observation of a considerable number of cases. Fortunately the time given me has been sufficient to enable me to make an inquiry from all accessible surviving patients who have been under my care with cancer of the uterus.

The question as to what are the ultimate results in treating cancer of the uterus can only be answered intelligently, if the extent of the invasion of the cancerous neoplasm be defined in the individual case; the operator should differentiate these cases with regard to the prognosis, guiding himself by the ascertainable local extension. We must look on cancer of the uterus as a local disease in the initial stages; therefore, we are in a position to say that if the malignant neoplasm is diagnosed during such early stage, before it has gone beyond the uterus, the ultimate result as to final cure is good in the hands of an operator who is a master in the technique of performing hysterectomy. Unfortunately, however, it is but seldom that patients are seen in the beginning stages; they do, however, increase in the practice of those who, on the slightest suspicious symptom, make a careful examination of such patient, and who, in all submitted to an abrasion of the uterine mucosa, have the scrapings carefully examined by a competent pathologist. The age, in giving a prognosis, must also be considered as an important factor; the older the patient, the better is the prognosis, always with the proviso that the case is one very favorable for a radical operation. Women under 30 years, unless the neoplasm is in its incipient stage, give an unfavorable prognosis as to ultimate freedom from the disease. Its seat has also a bearing on the prognosis. The most favorable cases are, so far as my own experience goes, malignant disease of the uterine body; next favorable, cancer of the vaginal portion; then cancer of the cervical mucous membrane. The most unfavorable variety is the cervical cancerous nodule.

The method usually adopted in citing the value of treatment for cancer of the uterus loses greatly by neglect of consideration of the points noted. It is obvious that it is an injustice toward any given therapy to quote, for instance, that of 100 cases of cancer of the cervix operated on by vaginal hysterectomy, 50 patients are alive after one year; 30 after 2; 10 after 3; 8 after 4; 1 after 5 years. For the purpose of arriving at an accurate prognosis, as to the ultimate results, we should know what the form or variety of cancer was; which part of the cervix was the seat of the neoplasm; how much progress the disease had made at the time of operation; the age of the patient operated on ,and then the description of the operative technique adopted in the respective instance. As an illustration permit me to cite an instance: A nullipara, 26 years old, presented herself with an epithelioma of the portio vaginalis, twenty-seven months ago. The vagina was appreciably infiltrated about one-fourth of an inch from its junction with the cervix. The parametria were free on the right side; on the left there was a slight thickening of the base of the broad ligament, which did not impress me as malignant, on account of the lack of a board-like, unyielding hardness. After rapid removal of the readily breaking down neoplasm, with a sharp curette, and subsequent cauterization, the upper half of the vagina was detached and closed over the portio by a continuous suture; the bladder, with the ureteral terminations, was well pushed out of the field of operation by a large gauze strip; the parametria were ligated as far from the cervix as possible and the uterus removed *in situ*, with the adnexa. The patient is still free from any evidence of recurrence.

Suppose the technique would have been such as we frequently [illegible] employed even at this day; curetting of the disintegrated neoplasm followed by extirpation of the uterus, the operator keeping close to the cervix, for fear of injuring the ureters; I doubt whether the result obtained could have been achieved. Suppose even moderate malignant infiltration of the parametria had been present, then I do not believe that there would still be freedom from the evidence of a recurrence. The cauterization after curetting, with subsequent resection of the vagina and covering the malignant surface with the loosened portion, prevents the chances of an implantation or vaccination infection, to which George Winter has called attention. Again, the probability of a good ultimate result would be still better, if the patient's age, at the time of operation, had been double.

Let us view cancer of the supravaginal portion of the cervix for a moment. Experience has taught us that the peculiarity of cancer of the uterus is that, in its early stages, it will not encroach by dissemination to other anatomic segments or parts of the uterus from where it had its primary origin. A patient with beginning carcinoma of the cervical endometrium consults her family physician on account of leucorrhea and the discharge may occasionally be slightly intermixed with blood; the examination reveals an intact os externum of the portio, while about the vaginal portion nothing abnormal seems to present itself to the examining finger; she is dismissed with a prescription for some remedy like ergot or hydrastis canadensis and ordered to take douches. About three months later she is examined again. By that time a crater may have formed in the cervical cavity, the supravaginal portion be invaded in its entirety and the parametria affected; the probability is that it is too late at such a stage to do a radical operation with the prospect of a good ultimate result. Not infrequently such cases are sent to the specialist as beginning cases of cancer, whereas the beginning was four to five months previously, and that was the proper time for operation.

The patients who have a hard carcinomatous nodule in the supravaginal portion of the cervix do not present any symptom until the neoplasm begins to break down, and it is then always too late to do radical work, because the parametria are generally extensively involved; it is by mere accident that such patients are seen early enough to do a hysterectomy, which will promise a good ultimate prognosis. I can not emphasize it too strongly, that we should invariably think of malignant disease, and use every method known in arriving at a diagnosis, to make sure that cancer is *not* present before dealing lightly with the respective patient. The same precaution holds good for disease of the corporeal endometrium, causing slight atypical bleeding or prolonged menstruation. We should never be satisfied with doing a curetting if there is the *slightest* suspicion, unless the microscopic examination of the scrapings shows an absolutely negative result. In making such curetting, it should also be remembered that a dull instrument is inadequate and that the mucosa must be removed from *all* portions of the interior, including the uterine cornua. I have never seen a case in which, if the microscopic examination showed cancer in one part of the scrapings, no matter how small, the examination of the extirpated organ did not verify the diagnosis. True, sometimes opinions may differ, but this is not the fault of the microscope but rather of the examiner; it is also true that a patient may have cancer and nothing has been seen in the scrapings to show it; this again is not the fault of the examiner, but it is due to the operator, hence the precaution noted, to remove from *every* part of the lining membrane.

Let us now turn to the results obtained by the speaker from radical operations for cancer of the uterus. The operation has been performed 131 times, 5 by the abdominal route and 126 by the vaginal. From the latter method 8 deaths ensued, as the direct result of the operation, making nearly 6.35 per cent. direct mortality. These are to be divided into: 3 from shock—1 of the latter had an extensive cardiac lesion, as determined a few hours after death, this taking place about three hours subsequent to operation; the lesion consisted of myocarditis and calcareous degeneration of the aorta, which was not diagnosed before operation; 1 foreign body pneumonia, also determined, or rather, verified by autopsy; in 1 patient the ureters were probably tied—unfortunately an autopsy could not be obtained to verify or dislodge the suspicion; 3 died of septic peritonitis.

If we analyze the cases operated on for cancer of the uterus by vaginal hysterectomy, more than two years ago, we find the following result: total number of patients, 111; direct mortality, 5.4 per cent.; mortality from recurrent cancer, 34.2 per cent.; living with recurrence, 2.7 per cent.; deaths from other causes than cancer, 2.7 per cent.; no report obtainable, 30.6 per cent.; living and free from any evidence of recurrence, 24.3 per cent.

| Year. | No. of cases. | Direct mortality. | Deaths known from recurrence of cause. | Deaths from other causes after recovery from operation and discharge of patient. | Living with recurrence. | No report obtainable. | Living and free from evidence of recurrence. |
|---|---|---|---|---|---|---|---|
| 1887 | 5 | 1 | 2 | .......... | .. | 1 | 1 |
| 1888 | 4 | .. | 1 | .......... | .. | 3 | |
| 1889 | 4 | .. | 2 | .......... | .. | 2 | |
| 1890 | 10 | 1 | 5 | .......... | .. | 2 | 2 |
| 1891 | 9 | 1 | 2 | One from pneumonia. | .. | 4 | 1 |
| 1892 | 12 | .. | 3 | One myocarditis. | .. | 4 | 4 |
| 1893 | 18 | 1 | 5 | .......... | .. | 8 | 4 |
| 1894 | 17 | 1 | 7 | One nephritis. | .. | 3 | 5 |
| 1895 | 19 | 1 | 8 | .......... | .. | 4 | 6 |
| 1896 | 4 | .. | 1 | .......... | 1 | 1 | 2 |
| 1897 | 9 | .. | 3 | .......... | 2 | 2 | 2 |
| 1898 | 3 | .. | 1 | .......... | 1 | ... | 1 |
| 1899 | 7 | 1 | ... | .......... | 2 | 1 | 3 |
| 1900 | 5 | 1 | ... | .......... | .. | ... | .... |
| Until April 1. | 126 | 8 | 40 | 3 | 6 | 35 | 31 |

So far as the radical operation by the abdominal route is concerned, I have not yet arrived at a positive opinion. Of the 5 patients operated on, 3 died as a result, although one of these was early in my career, when the Freund operation was first made known and the technique then employed could not be called radical, as now understood, if the method is employed at this day. Yet it must be conceded that abdominal hysterectomy as advocated by Riess, Clark, and Kelly, in this country, with extirpation of the retroperitoneal glands and lymphatics, is more grave and must necessarily give a larger percentage of direct mortality, and it is still a question with me whether the ultimate results from the operation will justify the procedure. When, in 100 cases operated on by radical measures, more than two years shall have elapsed from the time of operation, the statistics of that series will undoubtedly throw the balance in favor of one or the other method.

In instances of *beginning* cancer, in fact so long as the parametria are not involved, vaginal hysterectomy, properly performed, gives a fair percentage of ultimate recoveries.

It is my opinion that with the use of the hot iron, galvanocautery or paquelin cautery, the ultimate results will still be bettered. That this seems correct is illustrated by the published results of Byrne and Mackenrodt. With the limited personal experience which I have had with the method, I feel justified in agreeing with those authors.

In doing a vaginal hysterectomy, one must consider that it is for malignant disease, and must operate as far away from the uterus as can be done with comparative safety; the disintegrated structures should be rapidly removed with a sharp curette or spoon, and be thoroughly cauterized, charred, with a hot iron, before beginning the removal of the organ. The uterus should be removed *in situ*, unless a part of the vagina is resected and covered over the cervix. Subsequent to the operation, the administration of some form of arsenic is beneficial. The patients, during the first year after operation should be examined not less than once a month; during the second year, once in two months. Should there be the slightest infiltration of a suspicious character, then we should thoroughly cauterize with an actual cautery. One patient with cancer of the portio with a recurrence in the scar has been treated in this manner three times since her primary operation in 1896, with satisfactory result.

The question whether ligatures or clamps should be used in performing vaginal hysterectomy should not be dealt with in an offhand way; each has a place, especially so in hysterectomies for cancer; each has its advantages and disadvantages. The practical advantages which I have found with the exclusive use of the ligature method are: the patients suffer much less pain after operation, in fact it principally amounts only to the effects caused by the anesthetic; the convalescence is hastened materially—there is less liability to produce cystitis from catheterization. Theoretically it is a more surgical operation. For practical results, however, I have not found it superior to the clamp method, that is so far as the direct mortality and the remote results are concerned. What, on the other hand, are the advantages of clamps? The time consumed is greatly diminished—this is of very great importance with patients who are not robust; it is much easier to perform; one can generally work farther from the uterus. Theoretically, there is less danger of secondary infection—this, however, has not been borne out in practice in my hands.

I use ligatures exclusively, when the uterus is freely movable and if the vagina is sufficiently large, so that they need not be applied closely to the cervix, with the proviso that the patient's general condition is such that the greater amount of time consumed is of no consequence. When these requisites are not present, I deem the use of clamps safer, both for direct and remote results. The greatest danger of any vaginal method, when operating for cancer, is the injury of the uterus. This complication is more surely avoided by the abdominal method.

DR. E. E. TULL said that since 1890 he had operated on 20 cases of carcinoma uteri, in all of which the diagnosis had been confirmed by microscopic examination. Four of the patients are now living and 2 of them were operated on ten years ago.

DR. HIRAM N. VINEBERG said that out of about 12,000 cases of diseases of women seen by him in dispensary practice there has only been about 12 of cancer of the uterus. The majority of these women had borne many children and had suffered extensive lacerations; hence cervical laceration can not be considered an important factor in the production of cancer. He suggested modifying Dr. Kelly's method by making a longitudinal incision in the anterior wall of the vagina, through which the uterus can be delivered without any necessity for entering the peritoneal cavity posteriorly.

DR. GEORGE TUCKER HARRISON expressed the opinion that a patient should not be considered cured until five years have elapsed without recurrence. On this basis, 15 or 20 per cent. have been cured. The reason 80 per cent. or more were not cured was that the diagnosis had not been made early enough.

DR. JOSEPH E. JANVRIN said that four years ago he had reported 16 cases of cancer of the uterus that had originated in the cervix in which, by the despised and old operation of skinning out the uterus, he succeeded in saving 12 patients—at least at that time this number had been well for three years or more. Two of these are well and living at the present time; one is well after twelve years. In every instance the disease of the cervix was well marked, yet he secured 37.5 per cent. of cures. Of 4 in whom the disease had extended down on the vaginal mucous membrane, 3 were cured. Vaginal hysterectomy should be restricted in those in which the disease is only in the cervix or in the adjacent mucous membrane, and to adenoma and carcinoma uteri in their early stages. For all other cases he would advise abdominal or abdomino-vaginal hysterectomy.

DR. J. RIDDLE GOFFE said that he considers the vaginal operation the only justifiable one in cancer of the uterus, because of the liability to inoculate the freshly exposed tissues by other methods. His first objection to Dr. Kelly's technique is the turning of a carcinomatous cervix up into the peritoneal cavity, for this is simply inviting a dissemination of the disease in the peritoneum. He also objects to the method of quadrisecting the uterus, on the same ground. He would not hesitate to take out the whole vagina if this seems necessary in order to cut wide of the disease.

DR. RALPH WALDO believes that where the disease has lasted more than six months it is probable that recurrence can not be avoided. He prefers the vaginal operation, using ligatures.

DR. JOHN BYRNE, New York City—I deem it a privilege, no less than a pleasure, to have been afforded an opportunity of listening to this welcome and masterly résumé of personal experience by one whose opinions on any subject connected with surgical gynecology are worthy of every confidence and the fullest consideration. The difficulties oftentimes encountered in arriving at a corect diagnosis in the incipient or early stages of uterine cancer, and more especially where the disease has its origin in the fundus, are matters familiar to all, and the author's emphatic words touching the necessity for microscopic investigation in all doubtful cases are of the utmost importance, because while they sound the alarm, they preach the gospel of true conservatism.

Than cancer, in the broadest sense of the term, there is, perhaps, no other disease in the whole range of human afflictions more justly dreaded, nor is there another for the relief of which more so-called cures, from condurango to hysterectomy, have been lauded and resorted to, and from the days of Hippocrates to the present time. If the unhappy victim of this malady be a woman, and her sexual organs the seat of the disease, it is, indeed, hard to imagine a fate more pitiable, or an ebbing life so fraught with intolerable distress and utter hopelessness.

We are here to-night solely in the interest of these unfortunate victims of torture and despair, to consider, and, if possible, to decide, as to the best ways and means, through which we may contribute toward their relief and the prolongation of their lives. Such being our object then, it is to be hoped that the consideration of this important subject will not, as too often happens, be conducted in a slipshod or mere perfunctory manner, and that clincal facts, and not visionary theories, however plausible, shall constitute the basis and grounds of this discussion.

At this juncture in our friendly interchange of views, and as-time is precious, I fear the author of this valuable paper, as well as those who may have been impressed by the brilliant and attractive glitter of the work of one who concededly occupies a high place in the ranks of pelvic and abdominal surgery, and your humble servant, will have to shake hands, and for the time being, metaphorically speaking, part company.

With regard to the operative treatment of cancer of the cervix uteri, and to which limited sphere only my remarks apply, I have practically nothing to add to what I have stated over and over again, but more particularly in my critical analysis of the statistics of hysterectomy eight years ago, contrasting the results of this operation with those obtained by me through the agency of the electric cautery. I believed then, and I am now more than ever satisfied that if the time should ever come when the advocates of total hysterectomy, as the remedy *par excellence* for cancer of the cervix, can be coaxed, cajolled, or in any other manner persuaded to follow my method of operating, and then, and in this way only, become qualified to endorse or condemn, this vital question may reach a settlement. Judging from the past, however, we have too often been made to suffer from a surfeit of mono-ideal and sometimes monotonous intellectual pabulum, varied only by occasional changes of place and utensils, from vagina to abdomen and back again, and dished up, I had almost said slaughtered, by the irrepressible advocates of pelvic evisceration. In fact, any unsophisticated outsider might reasonably suppose that the entire body of gynecologists had settled down to the conviction that for cancer of the cervix, be it much or pathologically infinitesimal, nothing short of total ablation of the offending but doomed organ is to be considered.

Indeed, so universal of late years has this short-cut to the solution of difficult and complex problems become that gentlemen of more conservative, sometimes called obsolete, views, have been made to feel that they had no standing in court, and deeming silent discretion the better part of outspoken disapproval, have usually, and perhaps wisely, kept quiet.

In this way those of up-to-date ways and methods, occasionally having novelty, if nothing more, to commend them, in attending society meetings, if the subject for discussion happened to be cancer of the uterus, and being well primed and equipped for a one-sided contest, could always air their opinions and display their uterine trophies unchallenged and unhampered, as in the good old days of wholesale oöphorectomy. So, my friends, in spite of the courteous invitation extended to me to attend this meeting and to participate in the discussion of one of the most important, yet open, questions in the whole range of gynecology, I confess I do so with no little diffidence and reserve if not a feeling akin to obtrusiveness on my part.

Regarding the relative merits of hysterectomy, vaginal or abdominal, and removal of the diseased part by the cautery knife, not loop nor galvanic snare, which I have many years ago discarded as less efficient, and very thorough dry roasting of the remaining cavity, four years ago I made what I fondly hoped at the time might prove to be the final effort to induce members of the American Gynecological Society to give this method of treating operable cases of cancer of the cervix uteri a fair and practical test. On that occasion, however, the remarkably strict application of a rule governing time compelled me to desist at an important point in my remarks. In consequence of this, or perhaps from a lack of interest in the subject, the discussion was less full than I had reason to expect. A committee of three was named, however, to investigate the subject, and to send cases, or invite me to operate, but up to the present time *three patients only* have been referred to me, all in too advanced a stage to warrant even a satisfactory hysterectomy. I offer this statement in order to suggest what I have often been inclined to fear, the probable futility of every effort toward popularizing the galvanocautery.

With regard to the technique of vaginal or abdominal hysterectomy, as so lucidly described by Dr. Kelly, I have nothing to say, nor indeed does it properly belong to the subject of our inquiry to-night, except in so far as certain steps in such operations may influence primary mortality. By far the most vital and far-reaching question, and in fact the only one expressed or implied by the title of the paper, is what is the best treatment for uterine cancer, or, in other words, which of the two methods of operating now under consideration insures to the patient the longest period of exemption from a recurrence of the disease? As to primary danger from hysterectomy, there need be no contention on this point. In the hands of an expert operator, the extirpation of a cancerous uterus, as I have before said, need not be and has not been followed by a ratio of primary disasters sufficient to for a moment cause doubt as to the admission of such a procedure per se to the domain of legitimate surgery. On the contrary, the very large proportion of recoveries should be looked on as one of the many brilliant examples of modern surgery, and of which any reasonable operator ought to feel proud. Were it not, therefore, for the groundless assumption of those who have been persistently trying to minimize the difficulties, as well as the dangers of these operations, by quoting the phenomenal success of a few favored ones only, the question of primary mortality need hardly be considered. So when in 1892 I undertook the analysis of published statistics up to that date, my main object was, if possible, to disentangle and sift from the chaotic mass some grains of truth regarding *the period of exemption from* recurrence of the disease obtainable through hysterectomy.

Therefore, whether the death-rate due to this operation be 5 or 15 per cent., or, as in cases treated through the agency of the electric cautery, less than 1 per cent., need not trouble us at present, and does not seriously affect the more important questions regarding the degree to which life may be prolonged by either method, and the period of exemption from recurrence, assured or obtainable.

To any one who may undertake to glean facts and truth from the ingeniously and marvellously constructed statistical reports on the results of hysterectomy for uterine cancer, the task will be found to be one of extreme difficulty, and in some instances almost impossible. In some, I regret to say, will be found a strained, yet unsuccessful, effort to divert attention from leading and vital issues to a tabulated but unwarranted summary, while in others the perversion of figures is so manifestly, and it would seem purposely, resorted to to obliterate the tracks of disaster, that it will often be found hard to pursue this line of investigation with any degreee of patience. As neither the occasion nor time will permit me to go into details, for which I would refer to Volume xviii of the "Transactions of the American Gynecological Society," I will merely state as a sample of what may be learned by any one who will take the trouble to interpret reports on recurrences after hysterectomy for cancer up to 1892, and subsequent experience will in no material point justify any modification, the following: In summing up all the facts obtainable regarding the results obtained in 235 cases treated by a number of leading operators in Germany, France and elsewhere, we found but 63, or 27 per cent. of the whole, in which relapses were noted, while nothing whatever is said of the fate of 172, or 73 per cent. of the whole number operated on and tabulated as follows: One had no recurrence for 8 years, 1 none for 7, 1 none for 6, 7 none for 5, 17 none for 4, 15 none for 3, 19 none for 2, 2 none for 1 year. An average exemption from recurrence or death for 63 patients out of 235 was three years and nearly four months.

From reports like this, and it is a fair specimen of what is available, no possible trustworthy data can be gleaned, because if, for example, to each of the 172 patients, or those of whose fate we are told nothing, we allow even one year of life, which would be far in excess of what all records warrant, we have in the aggregate 381 years of exemption for 235 patients, or one year, seven months and thirteen days only for each.

Again, at the International Congress in Berlin, in 1890, Olshausen reported 163 cases of hysterectomy for cancer at the University Womans Klinik, 42 only of whom were living at the end of two years, and of the entire number who escaped death from the operation, namely 155, 19 only were free from recurrence.

Facts like these, and the records of every country with them, may be modified to an inconsiderable extent by the rare and more happy experiences of able and exceptionally fortunate surgeons like the indefatigable author of the paper under consideration, but I contend that they should be well pondered over and not dismissed, as they have been heretofore, with the vain hope that by improved technique and greater familiarity with these operations better results may yet be reached. It should also be remembered that, although a more or less perfect technique must and has lessened primary mortality, it can not likely influence, and has not materially, the great liability to recurrence, due mainly to traumatic infection, against which we can devise no reliable safeguard. To this latter defect and the unavoidable mauling of outlying tissues, often in an early but unrecognizable stage of cell proliferation, and thus more responsive to traumatic irritation, are we to attribute the great and well-known liability to recurrence after hysterectomy. Truly, the most noteworthy fact in the history of this operation is that a very large majority of women suffering from uterine cancer may submit to it yet live for a time at least.

Regarding my own experience in the treatment of cancer of the cervix by the electrocautery, covering a period of thirty years, I have but little to add to what is already of record. During the last ten years, what the advocates of hysterectomy would consider operative cases, i. e., those in which the disease is found to be limited to the cervix proper, the vaginal surroundings intact, and the whole organ fairly movable, have been comparatively few and rare. Consequently, of late years, most of my work in this line has consisted of a free use of the curette, trimming the ragged edges by cautery knife and thoroughly roasting the cavity. In this class of cases, when it is found that the disease has extended beyond the os internum, the sharp or the serrated curette is also freely used, but in exceptional cases only is actual cauterization carried to the fundus proper.

Several patients, at least five, of this advanced and otherwise hopeless class, operated on in this manner from ten to fifteen years ago, are now known and reported by reliable physicians to be perfectly well. Similar results in so-called inoperable cases are by no means rare in my experience, as my hospital colleagues well know. As for cancer of the cervix proper and uncomplicated, my reports and predictions of 1872, 1875, 1889, 1892 and 1894 have been fully confirmed and substantiated. In other words, in cancer of the cervix at an early stage or of circumscribed degree, excision by the cautery knife and deep and thorough dry roasting of the cavity by the dome-shaped electrode, while absolutely free from danger, insures a longer, if not a permanent, respite from recurrence than any other known means. Again, in more advanced cases, deemed at all operable by the most reckless advocates of hysterectomy only, the free use of the curette followed by electrocauterization as I have so often described, advised and resorted to will always be found to be a safe and palliative measure, and will often insure a nonrecurrence of several years.

Without going into details, and as the clinical grounds and basis of these statements, and the results of long and careful observation, I can simply say that in 100 cases of strictly cervical cancer, permitting of supravaginal excision by the cautery knife, and further dry-roasting of the cavity, the great majority will be followed by a permanent cure, while, in less favorable ones, an average longevity and freedom from relapses of from seven to eight years may reasonably be expected. In the more advanced class, always premising that the corpus be not involved, the results, as stated, are strictly in accordance with my experience.

The seemingly paradoxical assertion that the extirpation of the diseased part of a carcinomatous uterus by electrocautery, besides being absolutely free from danger, should also give better results than extirpation of the entire organ has usually been met with the simple *non credo* of those who fail to reflect on the peculiar effects and properties of the agent employed. My explanation of this apparent enigma, supplementary as it is to clinical facts, may be found in the volume of "Transactions of the American Gynecological Society" for 1892, and is as follows:

I am of the opinion that in the parametric tissue of many cancerous uteri, and much beyond what might seem to be the limit of disease, there exist some morbid cell changes due to faulty nutrition, or cancer germs, but, in so undeveloped a state as to be inappreciable even by the aid of the most powerful microscope. Under such circumstances there is surely nothing unreasonable in surmising that cell proliferation, hitherto slow, or almost dormant, would be hastened, and that formative processes, so responsive to any kind of irritation, would be roused into active life through the traumatic stimulus of an operation, and the exposure of more or less raw surfaces. On the other hand, in the progress of an amputation by cautery, and where the heated knife is so long and repeatedly applied —*for such operations must be slow*—the effects of the heat on outlying structures may be imagined by the shriveled and comparatively small size of what had been, before operation, a voluminous cervix. In no other manner do I think it possible to explain certain phenomena following these operations by galvanocautery, e. g.: 1, absence of fever and almost all pain, pelvic or peritoneal; 2, the almost universal immunity of the scar tissue after cauterization from secondary attack in the event of recurrence of the disease, and 3, in the case of relapse, the long respite obtained from reappearance of the disease in remote parts, even in the more unpromising cases of undoubted circum-uterine infiltration.

Why, it may be asked, have phenomenally successful results obtained through the agency of the electrocautery failed thus far to convince theoretic skeptics wedded to the glamor of more sanguinary methods? Why will gentlemen still declare there is but one remedy for cancer of the cervix uteri? Why will they persistently declare that there is positively *no place for* any treatment other than hysterectomy? And why will editors of journals published in the interest of gynecologic progress, in reviewing the treatment of uterine cancer, and supposed to be *au fait* in leading questions touching the subject, continue to insult our intelligence by stating in an *ex cathedra* fashion, that though the treatment of uterine cancer by hysterectomy "is eminently unsatisfactory," yet that "it is the best procedure now at our disposal?" Why will gentlemen still persist in palming off the base coin of obsolete methods as mine, and talk of removing a cervix by the galvanic snare, an instrument which I have not employed ten times in twenty years? Finally, where, I would ask, can we find, throughout the pages of gynecologic literature, a shadow of warrant for the dictum that hysterectomy, with its ghastly and life-curtailing record, is the only surgical procedure admissible in cancer of the uterus? These and many similar questions I shall not waste your time in discussing, but merely submit them for your own consideration and possible solution.

In the light of startling facts like those I have barely touched on, is it not marvelous to think that at this late day so few, if indeed any, of our numerous and otherwise progressive gynecologists should have accorded to the electrocautery a reasonably fair and practical trial? Those who have reluctantly admitted its claims to serious consideration have, for the most part, done so through the representations of others rather than from an adequate practical knowledge of its worth or possibilities. Hence it is not surprising that in nearly all past discussions on the treatment of uterine cancer by the galvanocautery, the most outspoken doubters and the most zealous advocates of any or every other method of operating have usually been those least qualified to judge. Whether the essential attribute of an umpire, i. e., the power or skill to compare or contrast, is wanting, opinions regarding the relative merits of any two or more methods of operating for uterine cancer, for example, as between the galvanocautery and hysterectomy, must necessarily be worthless, and should have no legitimate claim to consideration.

Within the last few years, however, owing to the substitution of the dynamic for the chemical current, the less frequent use of the troublesome and fitful battery, and the comparative facility with which the most delicate, as well as the most extensive, operations may now be conducted, by hospital surgeons especially, there is no longer any valid excuse for culpable apathy or indifference.

There is every reason to hope, therefore, that intelligent, unbiased and honest investigation, so long desired, may yet unfold the whole truth, and thus remove every doubt as to the rare exceptional and special efficacy of the electrocautery and the gradual abandonment of hysterectomy in the treatment of cancer of the cervix uteri.

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## ETIOLOGY, PATHOLOGY AND SURGICAL TREATMENT OF TUBERCULOSIS OF THE KIDNEY.

In the absence of a specific remedy for the treatment of tuberculosis, the clinician must avail himself of all those measures that have proved in any way helpful. While it is universally admitted that the tubercle bacillus is the exciting cause of the disease, it is recognized that the conditions, as yet undefinable, that render possible *the manifestation of its activity*, are scarcely less important. The mere presence of the bacillus does not constitute tuberculosis, but this consists rather in the reaction that takes place between the invading micro-organism and the attacked tissues. The disease is to be averted by *preventing dissemination of tubercle bacilli*, and by rendering the tissues resistant to their invasion; and the indications for treatment are the extrusion, destruction, encapsulation of the bacteria, or otherwise rendering them innocuous, the neutralization of their effects, and the repair of lesions. The tubercle is a local formation, and its removal would constitute the most certain means of cure. Unfortunately, however, the lesion is not single, nor always circumscribed, while often it is situated in an inaccessible organ, or is otherwise *not susceptible of excision. Of the several situations in* which such intervention is feasible and sometimes promis[illegible] the kidney is one; and the results thus far at[illegible] this connection are most encouraging. An [illegible] requisite for successful treatment is, here as [illegible], early *diagnosis*.

A most interesting discussion of the subject of tuberculosis of the kidneys, with especial reference to etiology, pathology and surgical treatment, has been entered into by Newman[1]. It is pointed out that renal tuberculosis may occur as acute miliary, as localized, or as chronic tuberculosis or caseous nephritis. Healthy kidney-tissue is thought, by reason of its abundant blood-supply, although it is more vulnerable than other portions of the urinary tract, to possess a remarkable power of destroying organisms introduced into its substance or of eliminating them from the system. Tubercle bacilli may, thus, be found in the urine of persons suffering from tuberculous disease of bone, the lungs, or other organs, in the absence of morbid structural change in the kidneys.

The natural power of the kidneys to destroy or eliminate micro-organisms may be impaired as a result of local disease or hemorrhage or traumatism. The kidneys may become invaded by tubercle bacilli through the blood-stream, the tuberculous particles being so small as to be stopped only in the ultimate capillaries, where they give rise to numerous miliary deposits; or through infective emboli entering a branch of the renal artery, and the tuberculous virus becoming disseminated throughout the area of its distribution. Invasion may take place also along the lymphatics of the kidney from foci in the lower urinary tract; by contagion along the lumina of the excretory ducts; by contiguity from adjacent diseases.

Infection by way of the blood-stream may result in obstruction of the capillaries or in tuberculous emboli of the arteries. In cases of acute miliary tuberculosis of the kidney, the bacilli are conveyed by the blood-vessels and are widely distributed. The disease is always associated with tuberculosis of other parts, and attacks children more commonly than adults. The condition usually escapes recognition during life, as it does not give rise to distinctive symptoms. A tuberculous embolus in the kidney may undergo caseation or become encysted. The disease is generally unilateral, and involves only a portion of the kidney-substance, although there may be more than a single focus. At first, the lesion is limited to the substance of the kidney, but in the further progress of the case, the tuberculous process is carried forward through other channels, unless a conservative inflammatory action closes the lymphatics and prevents extension. If the caseous material breaks down, rapid destruction of the organ may result.

Tuberculous pyonephritis may arise in several ways. Thus, the primary focus may be in the kidney-substance itself. If the ureter becomes blocked by tuberculous thickening of its walls, by impaction of masses of debris, by cicatricial stenosis, or by twisting, pyonephrosis will be likely to result. Primary tuberculosis of the pelvis of the kidney is less common than secondary infection. With tuberculosis of the kidneys there are usually associated inflammatory changes in the mucous membrane of the pelvis, the ureter and the bladder.

Tuberculous infection of the kidneys by way of the lymphatics, from foci in the lower urinary tract, is not uncommon. Such ascending renal tuberculosis is characterized by early obstruction to the escape of urine from the pelvis, with symptoms and signs indicative of hydronephrosis or pyonephrosis. Extension by contagion along the lumina of the ducts occurs in cases with ascending tuberculous lesions. Infection by extension of disease from adjacent organs is uncommon.

Statistics show that tuberculosis, both primary and secondary, occurs in the kidneys in about 5.6 per cent. of all cases of tuberculosis. The renal localization seems to be more common in children, in the proportion of nearly three to one. The presence of pyuria, together with renal symptoms in men, should always suggest examination of the genital organs and the prostate for tuberculosis, and association with rapid emaciation, anemia, elevation of evening temperature, and rapidly progressive marasmus should arouse suspicion of tuberculosis. The presence of pain depends on whether the pelvis and the ureters are involved or not. Vesical irritability, as manifested by incessant and painful micturition, is a frequent, and almost characteristic, symptom. Strangury also is often present. A swelling may be appreciable in the loin if the kidney is enlarged. Careful analysis and microscopic examination of the urine are necessary for early diagnosis. Polyuria is often one of the first indications of a tuberculous lesion in the kidney. Hematuria may occur long before, as well as after, the development of a gross renal lesion. It is rarely profuse. The urine contains albumin, but no tube-casts. The detection of the tubercle bacillus is extremely important. Ureteral catheterization may be necessary to determine whether the disease is situated on one or both sides.

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[1] The Lancet, February 24, March 3 and 10.

Tuberculosis of the kidney must be differentiated especially from renal tumors, septic pyelitis and pyonephrosis, and renal calculi. The prognosis is most unfavorable, the more so if the disease is not limited to one kidney, but extends to the ureter, the bladder or the other kidney. When the disease is localized in one kidney, or in only a part of the kidney, the tuberculous material may be discharged or may dry up into a firm caseous mass, while the other kidney undergoes compensatory hypertrophy.

It must be admitted that spontaneous recovery may take place, or the progress of the disease may be checked. Some time elapses between the onset of primary tuberculosis of one kidney and the invasion of other parts, and it is in this interval that the surgeon can intervene with advantage. A number of cases are on record in which life has been prolonged for a considerable time by surgical treatment, or good health has been conferred for a number of years. Nephrotomy may be practiced if the disease is limited to a small area, or has formed a single cavity that can be drained. Should recovery not ensue, we can then resort to nephrectomy. This should be undertaken as a primary operation when the disease is extensive and little can be hoped for from incision and drainage. When operative intervention is deemed advisable, symptomatic treatment should be employed. The internal administration of boric acid, salol, ammonium benzoate, and also of antipyrin and extract of hyoscyamus, frequently affords relief from vesical irritability. Strangury may be alleviated by the employment of preparations of opium by the rectum, or of warm sitz-baths; and when the urine has become alkaline, calomel given by the mouth exerts a beneficial effect.

## THE DEVELOPMENTAL CYCLES OF THE ORGANISM OF MALARIA.

In order to understand the peculiar and complicated developmental cycles of the malarial parasites, it is necessary to consider the organisms most closely related to them, namely the coccidia, because the details concerning these are much better known. As there is no change of host in the case of the coccidia, the process is not so complicated as in the malarial parasites. Shorn of a wealth of detail, the developmental cycle of the coccidia runs somewhat as follows, according to the recent review, by Lühe,[1] of the investigations of sporozoa, with especial reference to the malaria parasites and related organisms. As is well known, coccidia are found rather frequently in the intestinal tract and the liver of vertebrate and other animals. Examining the feces of an infected rabbit, for instance, there are found encysted parasites of varying size, which Schaudinn and other prominent investigators in this line call "oocysts;" they have a double contoured membrane and a unicellular content, called "sporont." The further changes are readily followed in the moist chamber. The unicellular contents divide into a certain number, commonly four, or "sporoblasts," which in turn become "sporocysts" by the appearance of a protected membrane around each spore. Each sporocyst forms two nucleated sickle-shaped bodies, the so-called "sporozoites." And now the sporocyst may remain latent for several months without losing the power to develop further, hence it has also been called lasting spore. Further development takes place only when it is taken into the digestive tract of a suitable animal; then the membrane is dissolved and the sporozoites penetrate into epithelial cells. The form of multiplication just described is termed "sporogony."

In the host, however, multiplication does not take place according to this type. After much controversy the zoologists practically agree that in the host multiplication takes place by fission. The sporozoites may develop and subdivide into numerous sickle-shaped organisms, called "merozoites." As the mother organism of the sporocyst is called "sporont" so the mother organism of the merozoites is called "schizont." This mode of reproduction is termed "schizogony," and it alone can explain the massive infections sometimes observed in animals and which consequently are the result of a sort of auto-infection. Schaudinn has shown that the schizonts rapidly form merozoites, and that multiplication in this manner at first goes on at a great rate. Later, when the host has become weakened and the conditions of the nourishment of the numerous parasites unfavorable, then another mode of reproduction is resorted to, and the sexual coccidia appear. Some of the merozoites grow to form larger, female cells, the macrogametes, and others form the so-called microgametocytes, the nucleus of which rapidly subdivides into a number of nuclei that become surrounded with a small amount of protoplasm and leave the mother cell as spermatozoa—microgametes. The copulation between the macrogamete and microgamete occurs according to the same principles as in the impregnation of the eggs of metazoa. The result of the copulation is the oocyst, the starting-point of sporogony.

Sporogony secures the preservation of the species and the spread of the infection, while schizogony increases the infection of the host. Coccidia consequently present alternating, sexual and non-sexual generations.

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[1] Cbl. f. Bakt., Abth. i, 1900, xxvii, 357.

Lühe then recounts step by step the development of our present knowledge of the mode of infection of human malaria and the rôle played by certain mosquitoes, especially Anopheles claviger, as one of the hosts necessary for the development of the malarial organism. These things have been described from time to time in these columns. The reproductive method first understood of the malarial organisms corresponds to the schizogony of the coccidia. The sexual processes that lead to multiplication by sporogony were first recognized by McCallum, who demonstrated the copulation of the male and female elements. Reproduction by schizogony takes place in the blood of the warm-blooded host—man. Sporozoites pass into the red corpuscles, develop into schizonts, which divide into merozoites. The merozoites may and ordinarily do repeat this process. After a time, however, they form sexual individuals and in pernicious human malaria these assume the crescent and oval forms characteristic of this affection.

The maturation of the sexual forms ordinarily takes place in the stomach of the blood-sucking mosquitoes. Here copulation takes place, and the resulting body—called "ookinete"—passes into the intestinal wall of the mosquito, where it forms innumerable sporozoites which ultimately collect in the salivary glands of the insect where inoculation of the warm-blooded host results during the act of stinging. And now multiplication by schizogony again begins. It will be seen that, stated in this simple manner, the developmental cycles of the malarial organisms correspond accurately to those of coccidia, the essential difference being that in the case of the malarial organism the sexual cycle is connected with the change of host and runs its course in the mosquito.

The intracorpuscular parasite seen in the blood of quartan malaria, for instance, is a sporozoite; as it grows it becomes a schizont—sporulating body—and the "spores" formed as it breaks up are the merozoites of the zoologic nomenclature.

It would be of lasting service to all present and future students of malaria and malarial parasites if the writers on subjects connected with reproduction of the organisms would agree as far as possible to the use of the same nomenclature. In a matter as complicated as this with phases subject to different interpretations, entire unanimity in nomenclature is not to be expected, however. The mere mention of the group of malarial organisms suggests a large list of synonyms. Lühe points out that according to the law of priority, which is the only one applicable in cases of this sort, the correct name is plasmodium malariæ. This name ought therefore to be used in the interests of uniformity and simplicity.

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Druggists of Vienna have agreed to charge a special rate for putting up prescriptions marked *pro paupere,* by the physician.

## ETIOLOGY OF ACUTE ARTICULAR RHEUMATISM.

In a recent review of the infectious diseases, Packard[1] considers the various theories in regard to the etiology of acute articular rheumatism. There is little or no foundation for the humoral and the nervous theories. The principal support of the humoral theory was the similarity between articular rheumatism and gout, the joints being affected in both. The lactic-acid theory grew out of this apparent relationship. But the fact that lactic acid may cause articular pain and swelling does not prove that it is the cause of acute rheumatism, because there is more to rheumatism than articular inflammation. How should the excessive production of lactic acid be explained? The nervous theory was the outgrowth of the similarity between the joint affections of acute rheumatism and of certain nervous diseases. There is no good reason to be advanced in favor of nervous joint centers. There is no real evidence of any relationship between rheumatoid arthritis and acute articular rheumatism, hence no support of the nervous theory is to be derived from comparing these two diseases with each other. Packard points out the confusion in nomenclature that has come from calling the secondary arthritis of such diseases as gonorrhea, scarlet fever, and pyemia rheumatism; at the same time such names as gonorrheal rheumatism, etc., give a suggestion as to the probable nature of acute articular rheumatism. There are a number of affections, such as lumbago, certain forms of wry-neck, etc., that are called "rheumatic" largely because they are painful, but there is not the slightest connection between acute articular rheumatism and these troubles. Either the term "rheumatism" should be restricted to these disorders, or else they should be designated by more appropriate terms.

Acute articular rheumatism is a distinct clinical entity. There is considerable resemblance between the general manifestations of acute articular rheumatism and pyemia, only that in pyemia there is no difficulty in studying the organism at work.

The efforts to discover the cause of acute articular rheumatism have thrown much light on arthritis of various kinds. It need not be stated that the infectious arthritis of pneumonia, of gonorrhea, and of a number of well-recognized infections, is not acute articular rheumatism.

Packard then reviews the principal reports of bacteriologic work in acute articular rheumatism. Without going into details suffice it to say that the results reported by the various investigators are so contradictory that no definite conclusions can be drawn. The organisms that have most claim for consideration are the bacillus of Achalme and the diplococcus of Triboulet. The diversity of the bacteriologic findings has led to the suggestion that acute rheumatism is not an etiologic entity, but that it may be produced by a number of different organisms. Packard finds the view advanced by Singer to be attractive, namely, that our disease is a modified pyemia, the difference between the two being one of degree rather than of kind. It has been pointed out that attenuated organisms have a certain affinity for joints. Packard also dwells on the relation of angina to rheumatism, the angina being regarded as an evidence of the entrance of the morbific agent into the body at the tonsils; further that the lymphadenoid tissue of the faucial mucous membrane may lessen the virulence of the organisms before they reach the internal organs. This theory is strengthened by Manfredi's experiments on the influence of lymphadenoid tissue on bacteria. Manfredi and his pupils[2] show that lymph glands may retain microbes for a long time, the virulence being more or less reduced. This theory is an interesting one, and it is strengthened in a measure by the fact that pyogenic cocci are reported present rather frequently, relatively speaking, in the joint and other lesions of rheumatism, but if the disease is a mild form of pyemia we would have a right to expect that pyogenic cocci would be found in the lesions far more constantly than has been the case up to this time.

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[1] Progressive Medicine, March, 1900.

There are many features of rheumatism that speak in favor of the phenomena being produced by a toxin or toxins: the frequent, in fact, common, absence of bacteria from the articular exudate, the evanescent character of the joint symptoms, the completeness of recovery of the affected articulations. Packard sums up the evidence somewhat as follows: Rheumatism is an exogenous disease; the part played by cold and wet in its production must be regarded as productive of a general lowering of vitality, permitting infection of some kind, whether specific or produced by various organisms can not now be settled. There is much to favor the view that pyogenic cocci of reduced virulence are frequently the cause of the disease. And it is also possible that bacterial toxins absorbed from some hidden bacterial focus produce the articular and some of the other phenomena of the disease.

On the whole it seems that this undesirable uncertainty and vagueness of our knowledge concerning the etiology of acute articular rheumatism may give way to clearer notions only through patient, thorough, clinical and bacteriologic study of larger series of cases. There is excellent room here for investigations of high practical and scientific value.

## OPERATIVE RELIEF OF SUPPRESSION OF URINE OF LONG STANDING.

Interference with the discharge of urine may result from mechanical or functional causes. Obstruction of the urinary passages at any point—by a calculus, a stricture, a neoplasm, a twist or a kink, or by pressure from without—will have this effect; as may also disease of the kidneys, by preventing the secretion of urine. Suppression of urine at times results from reflex influences. Deficient elimination of urine, from whatever cause, will be followed by the development of uremia, although the skin, the bowels and the lungs may for a time vicariously assume the functions of the kidneys. This period is usually not a long one, and generally rather short, but an interesting case in which it extended over sixty hours, and relief was afforded by operative intervention, is reported by Jaffrey.[1]

The patient was a man, 53 years old, who had felt ill for several weeks and for a short time had complained of pain in the left loin and a dragging sensation in the region of the left kidney. Micturition was frequent and the urine had appeared normal. Anuria, however, set in, with acute tearing pain in the left groin and lumbar region, together with frequent vomiting. Applications of hot fomentations to the loin and the administration of diuretics internally failed to afford relief. On introduction of a catheter into the bladder after suppression had been present for two days, only a little blood-stained mucus was obtained. No definite tumor could be developed on palpation at first, owing partly to thickening of the abdominal walls and their rigidity, but on the third day, a well-defined tumor could be felt and was thought to be the distended kidney, probably hydronephrotic. The catheter again failing to afford relief, the kidney was exposed through an opening in the loin and found to contain not urine, but rather more than a pint of blood-clot and serum between the perinephric fat and the kidney itself. Blood was present also between the capsule of the kidney and the cortex. The kidney was larger than normal, much congested and when incised it bled freely. The pelvis of the kidney was filled with blood-clot. No calculus and no other possible cause of obstruction could be detected. Irrigation was practiced, a drainage-tube introduced and the wound sutured and dressed with cyanid gauze. Urine was discharged through the tube, which slipped out of place, and was not restored, and in thirty-six hours practically all of the urine was being passed by the natural channels. The patient was out of bed on the sixteenth day and left the hospital three weeks after entrance, quite well. The nature of the influences responsible for the suppression of urine in this case is not clear, although it is suggested that it may have been due to a small calculus or to kinking or to compression of the ureter by the blood surrounding the kidney or finally to congestion of the kidneys.

## ATTEMPTED CONTROL OF SECTION ON MATERIA MEDICA.

The action taken by THE JOURNAL in regard to the proprietary and secret nostrums is having the effect of arousing to action those interested in these products. They are actively at work with the object of getting control of the Section on Materia Medica, Pharmacy and Therapeutics of the AMERICAN MEDICAL ASSOCIATION next month, and to accomplish this they are sending circular letters broadcast. Those addressed are editors of certain medical journals whose support comes only from their advertising pages, drug journals, and physicians whose influence they are hoping to get. Well-known secret nostrum houses of St. Louis and New York are especially energetic, and spare neither postage stamps nor even telegraph tolls. Many of the letters have been forwarded to The Journal by those who received them, although it has not been favored with any sent direct by the gentlemen managing the enterprise. When The Journal took up the fight against secret nostrums, it expected opposition and is not surprised at the first skirmish of the battle. But we can assure the gentlemen that they need not be in the least afraid that the "German chemical houses" will get control of the Section, any more than will the secret-nostrum houses. It will be controlled in the future, as in the past, by physicians of standing in the profession.

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[2] Virchow's Arch., 1899, 155, 335; Ztft. f. Hyg. u. Infektionskr., 1899, xxx, 64.

[1] The Lancet, March 3, p. 612.

### DOES NOT TAKE A JOKE.

An English medical statistician, in reporting on the mortality of his district, for 1899, took the occasion to suggest that the predominance of male births was influenced by the patriotic enthusiasm aroused by the present war. This was apparently offered as a facetious comment and it was accepted as such by the council receiving the report. Our British contemporary[1] that gives us the item does not appear to take it kindly as such. It not only ironically congratulates the council on its sense of humor, but gravely proceeds to remark that the figures are too small to afford any sound conclusions, and that a still greater fallacy is involved since it is impossible to suppose that maternal patriotic zeal could have affected the sex of unborn children in the last two or three months of pregnancy. Hence it says: "absurdities of this kind will do nothing to advance the position of the medical officer of health as an instructor of the community." The humor of the suggestion appears to have been comparatively innocent; at the worst it is only a matter of taste, but the serious consideration it has received has a still funnier side.

### EPILEPSY, RICKETS, AND THE LYMPHATIC CONSTITUTION.

The association of idiopathic epilepsy—*grand mal*—with the lymphatic constitution—persistence of thymus gland, hyperplasia of lymph nodes, and of spleen—has been emphasized of late by Ohlmacher. The association of lymphatism and of idiopathic *grand mal* has been so strikingly frequent in the autopsies in Ohlmacher's laboratory at Gallipolis, Ohio, that a thorough study of the literature bearing on persistent thymus and on the lymphatic state became necessary. The clinical condition of thymic asthma, or laryngismus stridulus, of infancy is connected on the one hand with the lymphatic constitution, of which enlarged thymus is often but a part, and on the other hand clinicians are wont to associate it with rickets. Tetany and infantile convulsions are also referred to "the rickety diathesis." With these considerations in view, and guided also by gross pathologic evidences of rickets in some of the epileptics, Ohlmacher was led to think more and more of the relation of idiopathic *grand mal* and rickets; and, all things considered, he became convinced that rickets plays an important rôle in the development of epilepsy.[1] Ohlmacher[2] refers, with a certain sense of satisfaction, to the fact that Gowers in 1885 had reached the same conclusions from purely clinical data obtained from a careful study of the infantile period of ninety-eight cases of epilepsy. Gowers was so strongly impressed with the apparent influence of rickets on the development of epilepsy that he was led to suggest that a considerable proportion of cases of epilepsy are really within the range of preventable diseases. There is reason, then, for continued effort toward clearing up the relationship of rickets, epilepsy, and the lymphatic constitution. We are as yet in the dark as regards the essential nature of rickets, and the lymphatic state. But at all events, infant hygiene and feeding should be brought up to the highest standard so as to do what can be done, in the light of our present knowledge, to prevent epilepsy and other neuroses that seem to have some connection with such diseases of infancy as rickets.

### THE PLAGUE AND COMMERCIAL INTERESTS.

The San Francisco Board of Health started out right when the bubonic plague first developed in that city, and courageously did its duty in spite of bitter opposition. But in the more recent developments it has certainly laid itself open to censure. Two weeks ago[3] we noticed the discovery of another case of the plague in San Francisco's Chinese quarter, the account being sent to us by telegraph by our regular correspondent. Shortly after his telegram was received, another came in which we were requested not to publish the matter, as the merchants' association there desired it kept out of the papers. Developments show that the merchants succeeded and that while they kept a knowledge of the conditions out of the general newspapers—a report of the case appearing exclusively in The Journal—the disease spread. Secrecy in this instance meant half measures in fighting the disease, whereas the most energetic steps, those which could only be carried out openly, were demanded. The penny-wise policy has proved to be a pound-foolish one for the business men of San Francisco. We have frequently asserted that there is no danger of the plague spreading in this country, even though it came to our shores, but if secret half-hearted measures are to be adopted in deference to commercial interests, then a different story may have to be told. The San Francisco Board of Health has been abused by the newspapers and will be in the future, probably, but none the less its duty is to protect the people against the spread of the disease, even if commerce should temporarily suffer by the publication of the actual conditions.

### MEDICAL SOCIETIES.

A British contemporary,[4] remarking on the fact that some 700 medical societies are entitled to representation at the American Medical Association, says that the United States must be the "happy hunting-ground" of medical organizations. It further states the fact that the figures given do not represent the total, and mildly deprecates the mighty burden of literature that must be thrown upon the profession if all the societies regularly publish proceedings. The local American medical society is an institution that is not fully understood by outsiders, but it is nevertheless a very important and valuable reality. Were its possibilities fully developed, and had every one of the thousands of counties an organization, the numbers would still more astound our contemporary. There would be, however, less danger of wasted or buried wisdom than it seems to think; such societies are or should be local stimulants of scientific medical work, but not necessarily publishing bodies. That society proceedings do sometimes bury valuable papers, so far as the general knowledge of their contents is concerned, may still be occasionally true, but it is certainly less so now than at any former time. The greater evil, if it is an evil, at the present is the over and over republication of the same articles. In any case the danger from multiplication of local centers of scientific medical progress and thought is not in this or any other respect as yet a serious one, although the same can not be said of the district, tristate and seminational bodies.

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[1] Med. Press and Cir., May 2.

[1] Bulletin of Ohio Hospital for Epileptics, Vol. i, Nos. 2 and 3, 1898.

[2] Am. Jour. of Insanity, April, 1900.

[3] The Journal, May 5, p. 1141.

[4] Medical Press and Cir., May 2.

### THE PLAGUE.

The newspaper reports of new cases of plague in San Francisco are not surprising; in fact they are no more than was anticipated. Any of our Pacific ports in direct communication with the Orient and with a specially segregated Mongolian quarter are liable to the same possibilities, and inland cities with similar elements in their population are also not free from danger. The influx of Japanese was never greater than at the present time, and it may be that in this is our greatest danger. Plague is now, however, a pandemic; it has reappeared in Egypt, it exists in South Africa, South America, Australia, China, Japan, Russia, and Persia as well as in India, where it has extended itself, being malignant in the eastern portion of that country, in Calcutta as well as in Bombay. It is therefore a universal danger and one that should receive the attention of sanitarians everywhere, as, with the greatly expanded modern methods of communication, no city with extensive commercial relations can be considered altogether safe. There is one cheerful side to the picture, however, and that is that modern methods of sanitation are a far better protection than those in vogue in the past and that thus far the plague has gained no lasting foothold in any European city. Better modern civilized habits of life have also apparently robbed the disease of many of its terrors, for our race at least. In Hongkong, where it was long epidemic and where the mortality was about the highest known, it was treated by the European community almost as a negligible quantity and its ravages were almost, if not quite, exclusively among the native population. We now know many things in regard to the disease that we did not know before, and while there is not the familiarity that breeds contempt, it may rationally relieve us of much of the senseless fear of this disease that has prevailed in the past. The possibilities of preventive inoculations are also to be considered when calculating the dangers, and we can safely say that if health authorities do their duty the recurrence of anything like the Middle Age epidemics is a very remote probability in any country inhabited by civilized whites. What the plague can do in a country like India at the present time is an object-lesson of the need of due precautions and healthy living on our part. It may be we will find it a necessity to do more than we have done in the past to prevent an undue influx of unassimilable Orientals, with their habits and diseases, over our boundaries.

### ANTIVIVISECTIONISTS AND THE "BRITISH MEDICAL JOURNAL."

A peculiar libel suit against the *British Medical Journal* has just been decided in London, in favor of the defendant. One Adams, the editor of an antivivisection publication, discovered a "mare's nest" in a government report, and thought he could make a point against experimenters in that they had, as he supposed, obtained authorization for experiments on animals without anesthetics, but had employed them. He wrote to the Home Secretary in regard to the matter, and received a specific reply that he was mistaken as to facts. Not satisfied with this he sent an insulting circular letter to the gentlemen mentioned in the report, and a number of others, inferentially charging them with bad faith or incompetence in obtaining certificates authorizing experiments without anesthesia and afterward using it, and saying that he should accept their silence as assenting to the accuracy of his inferences. This communication, of which it was said by the trial judge in his summing up that "a more impertinent letter was never written by one man to another," was sent out to over seventy gentlemen, forty-one of whom had no connection whatever with the experiments referred to. A copy or copies of it naturally came to the hands of the editor of the *British Medical Journal* who, in what appears to us to be exceedingly temperate comments, mentioned the writer as an "irresponsible editor," which was the basis of the libel suit just concluded. The evidence showed that the reports and letters were easily understood by any one who wanted to understand them, and that there was no reason for the inferences drawn except the desire to find fault. There are several strange features in this case: one, that this editor who, as the evidence shows, was by no means careful as to imputations about others, should have felt himself libelled by the extremely temperate criticism of the *British Medical Journal*. As the judge remarked, the difficulty in dealing with the case was because the defendant was not the plaintiff; and the whole proceeding is perhaps an illustration of the general state of mind of these especially self-righteous zoophiles. Another feature illustrating this and their methods is the fact that, failing a charge of cruelty, he made one of bad faith; fraud, or ignorance because giving pain was avoided. This antivivisectionist was certainly hard to please. It is not always fair to judge a class by one of its representatives, but this is only an extreme case, if it is that, of the usual methods of the antivivisectionists. There is a general family likeness in them all; they are all too ready to distort facts, and employ the *suggestio falsi* on the very slightest basis of inference. The petty malignancy shown in the course followed by the plaintiff in this suit is still another evidence of what numerous other facts have illustrated in the past, that excessive zoophily exists often in inverse ratio to philanthropy.

# Medical News.

Progress of the Plague.—At a meeting of the San Francisco Board of Health and the attorneys of the Chinese Six Companies, May 22, a letter was drawn up for posting in Chinatown to the effect that the Board will not force the Chinese to submit to inoculation and that only those volunteering will receive the prophylactic injection. A house-to-house canvass of Chinatown will be made, to discover, if possible, any hidden cases of the disease, and to thoroughly cleanse the disease-breeding spots. As noted in our editorial columns this week, the Board has endeavored to keep the actual conditions from the public, but on the 21st it admitted, in a circular to the other state boards, that there had been nine deaths from bubonic plague, all Chinese found dead in Chinatown. No further cases are known, but every precaution to prevent the recurrence of the disease is being taken. Rio Janeiro, Brazil, is also a suspected plague center, several cases of the disease being officially reported, and eleven suspicious ones on the 22d. The plague has also appeared in a Persian village near Bagdad, and in Persian Kurdistan, where there have been 122 deaths. The sanitary council has met in extra session at Constantinople to consider these facts, and the Bassorah authorities have been ordered to draw a sanitary cordon around Suleimanie. Cases of plague have also been reported on vessels arriving at Barcelona from Manila, at Assyr, Rangoon and Mattrah in Oman. The *St. Petersburg Med. Woch.* states that advices from Tokio, Japan, announce that Kitasato has discovered a second plague bacillus. The existence of a second casual agent explains the conflicting results with Yersin serum, and Kitasato hopes to be able to produce a new plague serum which will be effective in the cases in which the Yersin serum fails.

## PENNSYLVANIA.

### Philadelphia.

Authorities of St. Timothy's Hospital have appointed Drs. William C. Todd and James Libard visiting physicians.

Heirs of the late Percival Roberts have donated $50,000 for an addition to the St. Timothy's Hospital as a memorial to him.

The annual commencement exercises of the Jefferson Medical College were held May 15. Over 100 candidates received their diplomas. The degrees were conferred by Hon. William Potter, and the presidential address was made by Dr. James D. Moffat, president of Washington and Jefferson College.

The Philadelphia alumni of the Medico-Chirurgical College held their annual exercises May 18, in the clinical amphitheater of the hospital. The principal address was delivered by Adj.-Gen. Thomas J. Stewart. A banquet followed, at which the principal speakers were: Thomas J. Stewart, Dr. Henry Fisher, and Dr. Frank Haehnlin.

The number of deaths in this city during the past week was 535, an increase of 41 over the previous week, and an increase of 152 over the corresponding period of last year. The principal causes of death were: apoplexy, 22; nephritis, 33; pneumonia, 75; measles, 22.

The board of Trustees of the Philadelphia Polyclinic have recently appointed Dr. James Thorington as professor of diseases of the eye. This is a new chair in that department.

Dr. J. M. Da Costa has been chosen orator for the annual commencement exercises at Yale Medical College. His subject will be "Questions of To-day in Medicine."

Mr. W. B. Saunders announces that he has associated with him in business Mr. F. S. Hopkins and Mr. F. F. Legner. The former has been manager, heretofore, of the subscription, and the latter of the publication, department. The firm will be known as W. B. Saunders & Co.

On the afternoon of May 14, a fire broke out in a building adjoining the Germantown Hospital and for a time threatened that institution. The loss was about $1000.

#### COLLEGE SUED BY STUDENT.

A student in one of the medical colleges recently entered suit against that institution for $2500 damages for refusal of the defendant to allow the plaintiff to take the final examinations. The student claimed that he entered this college in 1896, but was subsequently compelled to finish his course at another institution. The college maintained that he was in arrears for his tuition and had failed in certain requisite studies. The jury, after being out all night, failed to agree and was discharged.

## NEW YORK.

### New York City.

At the New York Polyclinic, Drs. Francis J. Quinlan and R. C. Myles have been elected professors of laryngology and rhinology.

#### MILK BOOTHS.

The board of estimate and apportionment has appropriated $4000 for the construction of two ornamental booths, one for Central and the other for Tompkins Park. They are to be used for dispensing the sterilized milk and infant food supplied by Nathan Straus, and are to cost $1400 each. By the end of this month Mr. Straus proposes to have fifteen milk booths in operation in this city. These are to be provided with proper facilities for cooling and preserving the milk.

#### CLOSING OF TRINITY HOSPITAL.

For the first time in the twenty-seven years of its existence, Trinity Hospital has been closed, and it will not reopen until October 15, as it is necessary to make extensive alterations in the building. The fact that in the fall it is to be placed in charge of trained nurses has probably given rise to the rumor that this step was taken as a convenient way of retiring the Angelican Sisters of St. Mary, who have been in charge all these years.

#### THE BICYCLE AND CONSUMPTION.

The long-distance cycle riding of William R. Brown is of a different kind from that to which the public has been treated in the past, for a decidedly novel feature has been introduced—a long-distance bicycle ride with the object of demonstrating its value as a consumption cure. This man has pluckily pedalled away in the face of all sorts of difficulties and discouragements, and in a ride of nearly 148 hours has covered 1400 miles through mud and rain. He was off his wheel only thirty-seven hours altogether, and his total sleep amounted to 11½ hours. On the completion of his fourteenth century, several physicians examined him. They not only found him to be in fit form to continue his ride, but he had only lost 3½ pounds from the commencement of the ride. The respirations were 22, the pulse 60, firm and regular, and the temperature normal. He seemed no more exhausted than most persons at the completion of a single century. The remarkable thing about his weight was its increase, he having gained 3½ pounds in the last two days.

#### BURNED WITH CAUSTIC POTASH.

A dastardly assault was recently made on the wife of Dr. John J. Cronin. As she opened the door of their residence, in answer to a ring, a slender woman, dressed in black, and closely veiled, asked in a lisping voice if Dr. Cronin was in. On being told that he was not, she hesitated a moment, and then pulling out a small bottle from the folds of her dress, said, "I called to give him this," and pulled out the stopper and dashed the contents, a solution of caustic potash, in Mrs.

Cronin's face. The police were at once notified, and detectives put on the case. They found that less than an hour before the assault the woman in black had called on Mrs. Cronin's mother and had asked where the Doctor lived. From what the mysterious woman said it was evident she was well acquainted with the family. Mrs. Cronin was removed the next day to the Manhattan Eye and Ear Hospital but it is thought probable that she will lose the sight of one eye.

### DAMAGES AWARDED A PATIENT.

A case of much medicolegal interest, and one that has been in the courts for five years, has just been decided. It is the suit of Miss Helen D. Ward, to recover $30,000 damages from St. Vincent's Hospital for injuries resulting from the carelessness of a nurse in burning Miss Ward while the latter was still under the influence of ether after an operation. She entered the hospital in February, 1894, and paid $25 a week for board and $3 a day for the services of a special nurse. The operation was performed by her own physician and was entirely successful, but the burn on her leg, it was alleged, eventually compelled Miss Ward to undergo an operation to save her leg from amputation. The suit was first brought in March, 1895, and came to trial three years later. The judge directed a verdict for the defendant, on the ground that the hospital was a charitable institution and, therefore, not liable for the negligence of employees. The case was appealed, and in April, 1899, the judges of the appellate division unanimously ordered a new trial, holding that Miss Ward was a pay patient, and the action was not brought because of negligence, but for alleged breach of contract. At the second trial, last December, the jury disagreed. The third trial was last week, and as a result, the plaintiff was awarded $10,000 by Judge Gildersleeve and a jury of the supreme court. The decision is totally at variance with all precedent, and is likely to open the way for numerous suits against hospitals for real or fancied grievances.

## MARYLAND.

**Dr. T. Ross Payne** has been appointed health officer of Baltimore County, to succeed Dr. H. Burton Stevenson.

**Dr. H. O. Walton** has been appointed health officer and physician to the jail of Anne Arundel County.

**Dr. Charles F. Davidson** of Queenstown has been appointed health officer of Queen Anne County.

**Dr. C. L. Cecil**, the local health officer of Charles County, has contracted smallpox.

**Dr. O. H. W. Ragan**, Hagerstown, has been appointed health officer of Washington County, vice Dr. J. McPherson Scott.

**Dr. Charles A. Wells**, Hyattsville, has brought suit against the Baltimore and Ohio Railroad for $6000 for injuries received at a railway crossing.

**Dr. Chas. L. Mabbfeldt** has been appointed sanitary officer of Catonsville; and Dr. J. C. Schofield, of Highlandtown and Canton, both in the same county.

**Dr. H. Burton Stevenson**, secretary of the Baltimore County Board of Health, reports the smallpox outbreak at Sparrow's Point, a suburb of Baltimore, as checked. There are still 9 cases at the quarantine hospital, and 16 in the detention hospital.

### Baltimore.

**Dr. I. Edmondson Atkinson** has resigned the chair of therapeutics in the University of Maryland.

**Dr. John A. Schulte** has been appointed vaccin physician and health warden, vice Dr. J. J. Valentine.

**Dr. G. W. Truitt**, a member of the late legislature, has been appointed chief clerk by the new state insurance commissioner. The salary is $2000.

**The register** of the Johns Hopkins University, recently issued, shows that there were 231 students enrolled in the medical school, of whom 20 were in special courses.

**The spring** state medical examination of applicants to practice medicine commenced May 16, and continued four days. Eighty-three persons were examined.

**At the** Hebrew Hospital, Dr. A. L. Rettaliata has been reelected resident physician in charge. Drs. Jos. Blum and Sidney Cone have been added to the visiting staff, and Dr. Jos. Seligman has been put in charge of the dispensary.

**Mr. Henry Waters** presented to the city the keys and deed to the public bath-house at 131 and 133 South High street, May 17. Mr. Eugene Levering, president of the Public Bath Commission, made an address showing the necessity of public baths in crowded neighborhoods.

### FIRST KOREAN DOCTOR.

The feature of the commencement exercises of the Women's Medical College, May 14, was the graduation of Dr. Esther Pak Kim, of Seoul, Korea. She is the first medical graduate in America from her native country, and the occasion was regarded as of sufficient importance to be observed officially by the representatives of Korea in Washington, two of whom were present. She will become a missionary in her native land.

## ILLINOIS.

### Chicago.

**The capital** stock of the College of Physicians and Surgeons has been increased from $100,000 to $217,000.

**Dr. Clarence L. Wheaton**, owing to illness in his family, is going to Colorado to engage in the practice of medicine.

**The regular** quarterly examination of the Illinois State Board of Health will be held at the Great Northern Hotel, July 11-13.

**Dr. G. Frank Lydston** has been appointed professor of genito-urinary surgery in the Chicago Clinical School vice Dr. F. Kriessl.

**Dr. R. R. Campbell** has returned from the Pacific Coast, where he has been for the past five months on account of his wife's health.

**The new** Francis Williard National Temperance Hospital, at 167 South Sangamon Street, was opened May 17. The hospital will accommodate thirty patients, and has twelve nurses in attendance.

**Dr. Jacob Frank** sailed for Europe May 19, via the Hamburg-American liner *Graf Waldersee*. He goes as a delegate from the American Medical Association to the International Medical Congress that meets in Paris in August, where he will also read a paper.

**A diet** kitchen for infants and children will soon be opened at Thirty-second and Wallace streets, in the building of the Rouse Mission of the Trinity Episcopal Church. Its object will be the provision of pure modified milk, modified foods, fruit juices and meat extracts for poor children. It will be under the medical direction of Dr. Geo. T. Palmer, and Dr. Marcus P. Hatfield will be the consulting pediatrician, while the detail work of the kitchen will be in the hands of the trained nurses of St. Barnabas Guild.

## OHIO

**Dr. C. A. Probst**, Columbus, secretary of the State Board of Health, sails for Europe, June 5.

**The medical** staff of the Cincinnati Hospital, represented by Drs. Eichberg, Packer and Holt, together with the board of trustees, have just selected the site on Price Hill for the hospital for consumptive and other contagious diseases. The legislature has granted $25,000 for the purpose, and a two-story brick, fifty feet in length and thirty in width will be erected.

## VIRGINIA.

**The executive** committee of the State Central Hospital, near Petersburg, has accepted the plans for the new addition to the main building, which will accomodate 160 patients and cost about $18,000.

### Richmond.

**Seventy-five** received the degree of M.D. at the commencement exercises of the University College of Medicine, recently.

**At the** commencement exercises of the Medical College of Virginia, May 10, forty received the degree of doctor of medicine. Dr. Chas. A. L. Reed, Cincinnati, made the address.

## KANSAS.

### TEN YEARS' PRACTICE QUALIFIES PHYSICIAN.

The supreme court has decided that under the provisions of chapter 68, laws of 1870, enacted "to protect the people from empiricism and to elevate the medical profession," a physician who had practiced medicine for ten years prior to the taking effect of the act is qualified, but ten years of practice after the passage of the act confers no right on the practitioner. In this decision the supreme court reverses Judge Monroe, of Hays City, who held, in the case of the State vs. Wilson, that Dr. H. L. Wilson had complied with the law by practicing for ten years after its enactment.

### Topeka.

At the last meeting of the city council the salary of the city physician was reduced from $200 to $50, the regular monthly salary. This is on account of the abatement of the smallpox epidemic, as there are now only fifteen cases in the city.

#### HOSPITAL DONATION.

Rev. Chas. Sheldon has offered to give the city $1000 on condition that the council appropriate a like sum for the purpose of erecting a detention hospital to be operated in connection with the city jail. The city has accepted his offer, and work on the hospital will be commenced at once. Dr. Sheldon's donation is from his share of the profits resulting from the Sheldon edition of the *Capital*.

## DELAWARE.

The trustees of the state hospital at Farmhurst have reelected Dr. John J. Black, New Castle, president; Dr. Paris Carlisle, Frederica, secretary.

The Medical Examining Board has elected Dr. Irving Vallandigham, Middletown, president, and Dr. J. H. Wilson, Dover, secretary.

## TENNESSEE.

A class of sixty was graduated from the Chattanooga Medical College, at the recent commencement.

A consolidation of the *Memphis Lancet* with the *Memphis Medical Monthly* is announced, and in deference to the seniority of the latter journal the name of the new publication will be the *Memphis Medical Monthly*.

## IOWA.

Dr. J. C. Shrader, Iowa City, has been elected president of the State Board of Health.

Ninety-two applicants have passed the medical examination and been granted certificates to practice medicine in the state.

## NEBRASKA.

Fifteen students were granted diplomas from the Omaha Medical College, at the commencement exercises held early in the month. David R. Kerr, chancellor of the University of Omaha, conferred the degrees, and Prof. Henry Ward, of the University of Nebraska, addressed the class on "The Physician as a Scientist."

## CALIFORNIA.

Dr. J. F. Kitchings, Oakland, has been re-elected president of the State Board of Health.

Dr. Driesbach Smith has resigned as assistant in the Napa State Hospital, and will be connected with the Asylum for the Insane, at Livermore.

### Los Angeles.

The total number of deaths in Los Angeles for April was 142, or an annual rate per 100 of 16.54 per cent. Twenty-six were from pulmonary consumption, 2 of the persons being natives of the Pacific Coast. There were 281 cases of contagious diseases, as follows: diphtheria, 19; scarlet fever, 14; typhoid fever, 20; measles, 228.

Dr. Stanley P. Black, professor of histology, bacteriology and clinical microscopy, medical department of the University of Southern California, is suffering from a serious attack of blood-poisoning, there being special involvement of the glands under the pectoralis major and along the clavicle. Infection occurred through a slight wound in the finger while handling pathologic specimens.

## CANADA.

Dr. D. A. Shirres, Montreal, has returned from Baltimore, Md., where he has been carrying on research work in neurology.

Last week the death-rate in Montreal was more than usually heavy, 151 being registered. Of these, five were from typhoid fever.

There is an epidemic of diphtheria in the barracks of the Northwest Mounted Police stationed at Regina. The disease was brought in by recruits. The hospital is full.

Lieut.-Col. George Stirling Ryerson, Canadian Red Cross Commissioner in South Africa, has been appointed British Red Cross Commissioner with Lord Roberts' headquarters.

Dr. Colin A. Campbell, of the house staff of the Toronto General Hospital, has been appointed surgeon to the S. S. *Tartar* of the Canadian Pacific's line from Vancouver to Yokohama.

Dr. Alfred A. Loeb, who was graduated from McGill last spring, and who has since occupied the position of house physician of the Philadelphia Maternity Hospital, has been reelected.

Fifty houses in Montreal are placarded with scarlet fever notices. The civic hospital still continues full of these patients. So far the health officer is at a loss to account for the prevalence of the disease.

The following practitioners are at the head of the movement in Montreal to establish a free consumption sanitarium for the city: Drs. LeCavaillier, Mignault, Adami, Campbell, Johnston, Hervieux, Marsolais, Lesage and Dube.

The Toronto osteopath was up for trial last week and got off "scot free." The daily papers are reaping the benefit of it by the appearance of his card in their columns. Apparently we have not heard the last of osteopathy in Ontario.

The "cancer doctor" and his practitioner friend of this city, who, it will be remembered, were to be tried at the May assizes, for manslaughter, are now breathing easier, the grand jury having found "no bill."

The Dominion government is shortly to appoint a quarantine officer at Windsor. The necessity for this is shown by there having been 2700 cases of smallpox in Illinois, whence there is much travel into Ontario.

Passengers on the R. M. S., *Empress of India*, which is held in quarantine off Williams Head, near Victoria, B.C., are not permitted to leave the boat, pending instructions from Ottawa, there being a rumor that either plague or smallpox had appeared among the 100 steerage passengers.

Two physicians of Montreal are being sued for $1099 damages, by a laborer who received a railway injury to one foot. His claim is that his foot was amputated while under the influence of an anesthetic, although promise was given that the operation would not be performed.

Dr. McCarrey, milk inspector of Montreal, has reported that the milk-supply is much purer than that of the spring of 1899. A year ago twenty-five dealers were summoned for supplying an inferior quality; so far this season only two have been similarly dealt with.

Toronto University is advertising for two professors for the medical department. On account of the death of Dr. J. Elliott Graham, the professorship of medicine and clinical medicine is vacant, and the professorship of pathology also by the resignation of Dr. John Caven.

The secretary of the Provincial Board of Health of the Province of Quebec has issued a statement of the smallpox situation in that province. Since the outbreak of the disease in the lower part of the province, in January, there have been 230 cases and only two deaths. At the present time there are thirty cases.

Dr. Paul A. Gillespie, a graduate of Toronto University, who was referred to in these columns some time ago as President Kruger's physician, having been commandeered at the outbreak of hostilities for service in the Boer hospital corps, has again become associated with the British service after the taking of Boshof by Lord Methuen's forces. Previous to the war he was a practitioner in Winburg, Orange Free State.

#### TRINITY MEDICAL COLLEGE.

So far as Trinity is concerned, the session is finally closed. On the 17th inst., between fifty and sixty were made recipients of diplomas making them Fellows of Trinity Medical College. At the commencement exercises, held that afternoon, the Dean of the College, Dr. Geikie, presided, and as usual, gave some good, sound, practical advice to the graduating class. In the evening the members of the class held their class dinner. On the following day Trinity University conferred about seventy degrees in medicine; and the Trinity Medical Alumni Association held its eighth annual reunion. Dr. Allen Baines, Toronto, was elected president for the ensuing year.

### MONTREAL GENERAL HOSPITAL.

Dr. F. G. Finley, the secretary, has presented his annual report, showing that the work of the past year was greater than at any other time, though the receipts have fallen away to some extent. The ordinary income amounted to $76,421.72, and the expenditure to $81,570.75. The income was $1605.23 less than the previous year, while the expenditure was $1082.50 more. The total number of in-door patients treated to a conclusion during the year was 2824, an increase of 94 over the preceding year. Of these, 189 remained over from the preceding year, and 2810 were admitted during the year; and 175 remained in the hospital at the end of the year. There were 2629 discharged, and 195 died in the hospital, making a total of 2824 treated during the year. The average number of patients in the wards during the year was 167; the average number of days in the hospital was 21.3; and the aggregate number of days in the hospital by all patients was 60,078, a decrease of 2966 over the previous year. Of the in-door patients treated to a conclusion, there were 1795 males, and 1029 females. The death-rate was 6.5 per cent., or, excluding 106 dying within three days after admission, 3 per cent. In the out-door department there were 37,373 consultations, an increase of 2295. The medical superintendent, Dr. Von Eberts, was appointed again to the position. In consequence of the resignation of the president, F. Wolferstan Thomas, Esq., Mr. James Cathern was elected president.

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# Correspondence.

## Improvements in Medical Education.

Chicago, May 19, 1900.

*To the Editor:*—I have within the past few years been delivering special lectures at medical schools both in the East and in the West, and during that time I have made some observations concerning the state of medical education in this country, which, though not new to the readers of The Journal, may, nevertheless, be of interest to them. It need hardly be said that, wherever I went, I found such an *esprit de corps* among the members of the profession as, in spite of their many differences in theory and practice, constituted them a real brotherhood. There was also manifested in the schools an earnestness and candor which argues well for the future. The good work accomplished was so patent that I may be excused from dwelling upon it at any greater length. In pointing out some of the defects in the present system of medical education, I do not intend to asume the rôle of a carping critic. My sole object is to be of service to the cause of scientific medical practice.

In viewing the present system one does not have to seek long to find the root-cause of most of its defects. This lies to a large extent in the method of organization and conduct of the medical schools. The almost universal type of organization and conduct of the medical schools is that of a stock company. The school is owned and controlled by a few leading physicians who constitute themselves its professors. These stockholders, who usually have a large private practice, hire instructors in pathology, chemistry, etc., at salaries as low as possible. They elect as dean or secretary of the school a good business man who knows how to secure a large number of students and so can make the institution a paying investment—for the stockholders. In some cases, when this has been accomplished, the stock is then "watered" in order that it may be sold at a greater profit to new professors, and these in turn repeat what their predecessors have done. By a little play on words such a corporation might be styled "a traction company," organized for the purpose of *drawing* large dividends. Even without dividends the stockholder-professor regards it a paying investment.

From this brief description it is clearly seen that the money does not go to the hard-worked and poorly-paid laboratory man. The institution, on the contrary, is founded and run to further the selfish ends of the professor. Moreover, in such a school the leading professors, being general practitioners, consider themselves capable of teaching everything or anything, and hence such anomalies as the following are not uncommon: Dr. ——, professor of physiology, hygiene *and* demonstrator of anatomy; Dr. ——, professor of obstetrics *and* preventive medicine; Dr. ——, professor of children's diseases *and* medical jurisprudence.

Then, too, the professor, being a busy practitioner, does not have time to prepare for his classes. On his way to college he "thinks up" what he will give the boys in his morning lecture. Or he studies a text-book and gives it to them just as he read it the night before. I have seen such a professor, after a busy day, bolstered up in bed "bucking up" for the next morning's recitations. I have also read stenographic notes on lectures, every point of which was presented in the same manner and in the same order as found in some well-known text-book on the subject. Knowing the text-book used, the entire course could have been arranged by an undergraduate.

Furthermore, I have heard lecturers spending much time in describing laboratory methods, who could scarcely tell a staphylococcus from the ameba coli. I found one who could not even focus the microscope. He was the "head" professor, and his income from practice was $25,000 a year, gained largely through college association. (The bacteriologist and pathologist, devoting most of his time to the school, received $600 a year.) In a recent report on the financial condition of a certain college, it was shown that its receipts were $32,000. The expenses were $6000, leaving a net profit of $26,000.

It is clear that under such actual conditions as those outlined above, where the selfish financial principle is at the basis of the medical institution, the departments which require the largest expenditure of money for equipment will be the most hampered and crippled. This will be most keenly felt by the laboratory of the school, the place where all scientific work must begin. If the graduates of our institutions have not been deeply grounded in modern laboratory methods, how can we hope for real progress in the medical profession? It is also clearly seen that under such circumstances the real workers in the institution will be continually underpaid, and so there will be no stimulus toward proficiency. Only inferior talent will thus be attracted to such positions. Moreover, where the personal and selfish interest governs the faculty, all appointments will be conditioned by it, rather than by the sole condition of fitness and competency.

But to see the worst features of the present system, one must view it from the standpoint of the student. And in the first place a protest must be made against the prevailing didactic lecture and quiz method, which employs, almost exclusively, the one intellectual faculty—memory. We need to cultivate in the student the truly scientific method, *which emphasizes inductive reasoning based on observation and experiment*. One recent graduate not long ago remarked to me: "*I do not remember one thing my professor taught in his* didactic lecture, but the clinics I can remember very distinctly, not only the cases, but even the details of diagnosis, pathology, and therapeutics." The old method is a suspension of ideas in the mind in such a way that they do not become incorporated with past or present practical experience. Thus the student contracts a sort of "dyspepsia of the mind," or "cerebral indigestion." Moreover, by it the student's attention is directed away from the empirical and practical to the theoretical. He conceives the notion that the only equipment which a successful practitioner needs is a scalpel, scrap-blank and pencil, and a mahogany-top table. The thirty patients in his two hours a day in the business center is the outcome of this faulty educational method. Only an infinitesimal amount of what he has been taught can be put to any practical use by him. Nor is the student given the ability to acquire the right kind of practical knowledge. In the post-graduate work

I have been enabled to observe the results of these methods of education on the new as well as old graduates and find the grossest ignorance in matters relating to laboratory equipments, scientific medicine, and the physical methods of diagnosis and treatment.

This leads me to insist that all medical students should be given a practical knowledge of: 1. Hydrotherapy in all its many branches and forms. The physiologic effects of heat and cold constitute so vast a field that they ought to be known by the M.D., no matter what branch of medicine he takes up. I have known students who did not know the difference between the action on the system of water at 40 C., and of water at 55 C. 2. Hot and cold air baths have a place in therapeutics that can not be ignored by the educated physician. Only the ignorant product of the recitation room shuns these practical methods and relegates them to the domain of empirical quackery. 2. Medical gymnastics, such as physical exercise, massage, etc., is now a necessity in medical education. Under the direction of a competent physician grounded in the science and practice of medical gymnastics it would be of far-reaching value to the school, both for the professors and students, if for no other purpose than the personal benefit derived by the hard brain-racked student; the daily exercise of this branch of medical education would be a god-send. It would be a conservative and expedient policy, but the advantages are not confined to such narrow and selfish ends as the physical welfare of the student. Other professors on the faculty of such a school would soon become practically interested, to their own benefit as well as that of their patients. Students would learn to give massage to each other. The recent valuable work of Schott's method of cure for diseases of the heart is only another illustration of the wide application of the physical and mechanical supplementing the hydrotherapeutic method of treatment of this otherwise incurable disease. Take only the same time to teach this method as is required to teach the action of the digitalis series, and it will be far more valuable. Other physical methods, such as are used in the exploration of the cavities and organs of the body by means of sounding instruments, etc., for both diagnostic and therapeutic purposes, should also be taught in the medical school. Early education in those physical methods not only interests the student in "theory and practice" but develops a taste for exploration and investigation.

Electricity was formerly the useful property of quacks. Medical science has raised it to a high place in therapeutics. Electricity used internally and externally in all forms of application should be taught theoretically as well as practically. The therapeutic advantages of the electric light have recently added another useful form of electricity that may displace many drug prescriptions, but with greater success in the beneficial results derived. Finsen has shown most marvelous results from the use of the light in lupus.

Dietetics in all its branches is practically neglected in medical schools. That part of dietetics concerning the chemistry of cooking and the preparation of food is as unknown to the medical student as if the study did not belong to the science of medicine. It has a wider application and perhaps more necessary use than any single branch. Books on dietetics can not teach cooking and preparation of food. *It must be* learned in the diet kitchen. Discharge the cooks in the hospital and give each student an opportunity under an educated chef. If the old methods of instruction are thus supplemented by these more modern ones, the medical schools of our country will have taken a distinct step forward and the men who graduate from them will be fitted to gain the confidence of the public even more than they have in the past. If, at the same time, our medical schools could not only be affiliated with, but *incorporated into* the colleges and universities of the land, the mercenary spirit would, to a large extent at least, be wiped out, and the effect of a scientific atmosphere would be wholesome to both professor and student. In this way petty jealousies and rivalries which often result in the establishment of new schools with no endowment, poor teachers, and low entrance requirements, would be eliminated, and the standard of the whole profession raised.

Fenton B. Turck, M.D.

# Book Notices.

Treatment of Diseases of the Nervous System. *A Manual* for Practitioners. By Joseph Collins, M.D., Professor of Nervous and Mental Diseases in the New York Post-Graduate Medical School. Illustrated by Twenty-three Engravings. Cloth. Pp. 602. Price, $5. New York: William Wood & Co. 1900.

This volume is practically a manual on nervous diseases, in which special attention is given to therapeutic methods. It begins with a section on the etiology and the prevention of nervous diseases, followed by a somewhat longer one on the general application of the remedial measures. The bulk of the book is taken up with the consideration of the special forms of diseases and the remedies and measures applicable to them. It will be seen, therefore, that it is far more than merely a therapeutic work. The first section, on cause and prevention, is a very judicious summary of the general facts as known in regard to etiology and the prophylaxis of these disorders, and calls for no further special comment. In the second section the author's views are plainly expressed on the subject of serumtherapy, and he seems to believe that thus far only the thyroid is really of decided value. As regards the use of the bromids, probably the most misused drugs in the Pharmacopeia, he makes no mention of their occasional excitant effect, nor is it mentioned in his special article on epilepsy. In asylum practice this is sufficiently common to be noticed, and it is a little remarkable that while it has been observed by some of the very earliest experimenters, it has been such a late discovery by some of our leading neurologists. The author's opinion of hydrotherapy is a judicious one, and the same is true as regards electricity, where he certainly does not follow the extreme opinions of some specialists. Massage is more briefly treated, but on the whole we can agree with Collins in his estimate of its use; the same is true of his remarks as regards hypnotism. The treatment of special disorders, which takes up the greater part of the book, may be said to be according to the latest light on this subject, and a safe guide to the general practitioner. There is no mention, however, of the Baccelli method in the treatment of tetanus with carbolic acid, with which some remarkable results have been reported of late. Nor is the use of cannabis indica in migraine so entirely obsolete as might be inferred from its lack of mention. As regards the surgical treatment of epilepsy, he holds the view that is probably now held by the majority of those who have had experience with the disease, that it is practically useless as regards any permanent benefit and that even when the disease can be localized it is questionable whether serious surgical operations, such as trephining, is often justifiable, at least in other than very recent cases. The present claims of some ophthalmologists are hardly more than mentioned.

Excepting in the discussion of a few disorders, such as headache, very little in the way of prescriptions and formulas is given. The treatment is stated in a general way, and any one who looks here for special prescriptions is liable to be disappointed.

Dr. Collins writes in a very lively and readable style and it sometimes even appears that the style gets away with him a little. One or two of his expressions seem a little odd, for example such as that on page 113, where it would seem that he is calling male masseurs ancillæ. These few minor criticisms, however, do not imply any depreciation of the work as a whole; we have nothing but commendation for the book, and it will be a most valuable addition to the library of every general practitioner.

A Dictionary of Terms Used in Medicine and the Collateral Sciences. By Richard D. Hoblyn, M.A. Thirteenth Edition. Revised Throughout, with Numerous Additions. By John A. P. Price, M.D., Late Physician to the Royal Hospital for Children and Women. Cloth. Pp. 838. Price, $1.50. Philadelphia: Lea Brothers & Co. 1900.

This is an American reproduction of the well-known English work which has the sanction of long favor, this being its thirteenth edition. Special attention appears to be given to the etymology and correct Latinity, etc., of the terms here included. It is not as full as some American dictionaries even of similar size, but we do not believe there have been many important omissions.

Manual of Organic Materia Medica and Pharmacognosy. An Introduction to the Study of the Vegetable Kingdom and the Vegetable and Animal Drugs. Comprising the Botanical and Physical Characteristics, Source, Constituents, Pharmacopeial Preparations, Insects Injuries to Drugs, and Pharmacal Botany. By Lucius E. Sayre, B.S., Ph. M., Dean of the School of Pharmacy. Second Edition. Revised. With Histology and Micro-technique by William C. Stevens, Professor of Botany in the University of Kansas. With 374 Illustrations, the Majority from Original Drawings. Cloth. Pp. 684. Price, $4.50. Philadelphia: P. Blakiston's Son & Co. 1899.

This volume is clearly intended as a work for the pharmacist, to the physician it will be of use simply for reference. It is practically a treatise on medical botany. The section on animal remedies is short and includes only the older pharmacopeial preparations. In this edition the author has left out the chapters on elementary botany, from the earlier one, and replaced them by an extensive section on histology and microtechnique. This, with some other alterations mentioned in the preface, ought to make it still more useful to the large class for whom it has been prepared. Its very numerous illustrations are a useful aid to the text, and the book as a whole appears to be a very valuable treatise on its specialty.

A Manual of Modern Gastric Methods, Chemical, Physical and Therapeutical. By A. Lockhart Gillespie, M.D., F.R.C.P.E., F.R.S.E., Lecturer on Materia Medica and Therapeutics in the School of Medicine of the Royal College, Edinburgh. With a chapter on the Mechanical Methods Used in Young Children. By John Thomson, M.D., F.R.C.P., Assistant Physician, Royal Hospital for Sick Children, Edinburgh. Cloth. Pp. 175. Price, $1.50. New York: William Wood & Co. 1899.

This book seems to be very well fitted to meet a want. Most general practitioners have little practical experience in some of the methods of gastric diagnosis and treatment here described, the utility of which in certain cases is undeniable. The author has described them in a way to be clearly intelligible, and where his text requires it has supplied the needed illustrations. The book is one to be safely recommended to any one who treats gastric disorders, as giving information not so readily picked out of the larger works on the subject, and in a very convenient form. The reputation of the author is a guarantee of its accuracy in details.

Mentally-Deficient Children. Their Treatment and Training. By G. E. Shuttleworth, B.A., M.D., Medical Examiner of Defective Children, School Board for London. Second Edition. Cloth. Pp. 180. Price, $1.50. Philadelphia: P. Blakiston's Son & Co. 1900.

The first edition of this little work being out of print and still in demand, Dr. Shuttleworth has reproduced it in this volume, with the addition of a couple of chapters giving an account of an official inquiry in which he took part, on the systems of education of the feeble-minded. The results of this inquiry were embodied in a statute which is printed in the appendix. The book has been and will continue to be one of the best brief accounts of its subject in our language, and it is well that it has again been made available.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Assisted by Charles Adams Holder, M.D., Assistant Demonstrator of Therapeutics in the Jefferson Medical College. Volume I, March, 1900. Surgery of the Head, Neck and Chest. Infectious Diseases, Including Acute Rheumatism, Croupous Pneumonia and Influenza. Diseases of Children. Pathology. Laryngology and Rhinology. Otology. Cloth. Pp. 428. Price, $250. Philadelphia: Lea Brothers & Co. 1900.

The first number for the year, of this quarterly serial in book form, includes the usual digests, as indicated in the title. The first of these is a valuable résumé of the general literature, by Chalmers DaCosta, which is both critical and full, and will be found to be a most useful one. The second, by F. A. Packard, on infectious diseases, deserves equal commendation, and is noticed editorially in this issue. Blackader's digest on diseases of children is well done, though the literature is not so full as in the two above noticed, and the section on pathology, by Hektoen, is, as might be expected, thorough and complete, as regards the chief advances within the past year. The two concluding sections, on laryngology and rhinology, by A. Logan Turner, and otology by Robert L. Randolph, while in the main useful critical résumés of papers that have appeared, contain more omissions, if we may use an idiom, than any of the others in the book. A comparison with the recent published work of Head and Andrews will show this. As a whole the volume fully keeps up the reputation of the series.

On Fractures and Dislocations. By Professor Dr. H. Helferich, of Griefswald. Illustrated with 69 Plates and 126 Figures in the Text, Drawn by B. Keilitz. Translated from the Third Edition, by J. Hutchinson, Jr., F.R.C.S., Surgeon of the London Hospital. Cloth. Price, $3. New York: William Wood & Co. 1899.

This English translation is from the third edition of the German work, and as such it will be of value to American readers. The usefulness of illustrations is well shown by the fact that three-quarters of the book is thus taken up, the text filling less than 150 pages.

# Association News.

**Board of Trustees.**—There will be a meeting of the Board of Trustees of the American Medical Association in Room 237, Hotel Dennis, Atlantic City, N. J., at 10 a. m., Monday, June 4, 1900. Alonzo Garcelon, M.D., President.

**Membership Receipts.**—Members attending the Atlantic City meeting, and who have paid their dues for 1900, are reminded of the necessity of taking their receipts with them if they wish to avoid annoyance when they register.

**The Official Program.**—In order to avoid misunderstandings and to protect the interests of advertisers, attention is called to the fact that there is but one official program. This program is copyrighted by the Board of Trustees and contains no advertising matter.

**Delegates to the Meeting of the American Medical Association.**—Secretaries of societies are requested to forward the names of delegates as soon as possible after these are appointed or elected. George H. Simmons, M.D., Secretary, 61 Market St., Chicago.

**General Business Committee.**—The first meeting of the General Business Committee of the American Medical Association will be held at the Hotel Dennis, Atlantic City, N. J., on Monday, June 4, at 4:30 o'clock, in room 238. Subsequent meetings of the Committee will be held at the same place and hour, every afternoon, during the meeting of the Association, unless otherwise directed by the Committee. In order that the business of the Association may be effectively transacted, it is very important that all the members of the Committee should attend all its meetings. L. Duncan Bulkley, Acting Secretary.

**Railroad Rates for Atlantic City Meeting.**—As previously announced in these columns, the Trunk Lines Association and the Central Passenger Association have granted one and one-third fare rate on the certificate plan for the Atlantic City meeting. Tickets will be on sale in the territory of these Associations from May 30 to June 7, and good to return to June 23. Action has also been taken by the Western Pasenger Association and the same rate announced from all points in its territory, tickets also to be sold on the certificate plan, the dates of sale being May 30 to June 5. The return limit was made June 12 by this Association, but on account of the later limit allowed by the others, it will probably be changed to correspond with that of the Trunk Lines and Central Passenger Associations. The certificates will be signed at Atlantic City by Dr. W. Blair Stewart, N. E. Cor. Pacific and North Carolina Avenues, and a special agent will be present on June 6, 7 and 8. The territory covered by the two first-named includes practically everything north of the Ohio River and east of the Mississippi from Cairo to St. Louis, thence east of a line drawn from St. Louis to Chicago, through Jacksonville, Decatur, Gibson, etc. The Western Passenger Association's territory to which the certificate plan usually applies comprises points west of Chicago, Peoria and St. Louis, including Oklahoma, Indian Territory, Kansas, Colorado, Utah, Nebraska, South Dakota, Minnesota, Wisconsin, Iowa, most of North Dakota and Missouri, and northern Michigan and northern Illinois.

## Deaths and Obituaries.

JACOB R. WEIST, M.D., Richmond, Ind., died after only a few days' illness, May 14, aged 66. He received his degree in 1861 from Jefferson Medical College, and in 1862 was appointed assistant-surgeon of the Sixtieth Ohio infantry, and later was transferred to the Fourth Ohio cavalry. He subsequently became chief operating surgeon in the First Division of the Eighteenth Army Corps and finally was medical inspector and medical director of the Twenty-fifth Army Corps. He was a frequent contributor to medical journals on subjects of surgery and hygiene. He served as city health officer of Richmond, and as secretary and president of the Wayne County Medical Society, and as president of the Indiana State Medical Society. He was a member of the AMERICAN MEDICAL ASSOCIATION and represented the ASSOCIATION in the International Congress in London in 1881. He was one of the projectors of the American Surgical Society, and served as its first secretary.

EDWARD C. HUSE, M.D., Rockford, Ill., died May 14, aged 65 years. He was born in Massachusetts, and after graduating at Harvard, taught school until 1861, when he went to New York and attended the College of Physicians and Surgeons. Soon after receiving his degree he located in Rockford, where he had since remained. He has been a frequent contributor to medical journals, and in great demand for expert testimony.

LEWIS P. LAYTON, M.D., died at his home in Buffalo, N. Y., May 14, after a lingering illness of eight years. He was born in Erie County in 1819, and received his early education in the Springville Academy. In 1845 he was graduated from the Geneva Medical College, and immediately began the practice of medicine in Buffalo. He held many positions of honor in the medical fraternities and in local politics.

WILLIAM R. RAMSEY, M.D., Norristown, Pa., died in that city May 13, aged 68 years. He was assistant-surgeon, U. S. A., during the Civil War, and was in charge of the field-hospital at the battle of Gettysburg. He was later transferred to the frontier, and on his return practiced in Hazleton and Norristown.

EDWARD F. UPHAM, M.D., Randolph, Vt., died of apoplexy, at his home, April 15, aged 75 years. He was pension examiner for twenty-six years and had several times been president of the Vermont Medical Society, and was a member of the AMERICAN MEDICAL ASSOCIATION.

EDGAR BOLLES, M.D., Macomb, Ill., died May 14, aged 63 years. He was born in Ohio but spent most of his early life in Illinois. He was graduated from the Detroit Medical College in 1869, and after being an assistant to a physician there for some time located at Macomb.

ROBERT F. GRUBAUGH, M.D., Mansfield, Ohio, died very suddenly May 15, aged 36 years. He was graduated from the Western Reserve Medical College at Cleveland in 1888, and had since practiced medicine in Mansfield. He was secretary of the North Central Ohio Medical Society.

R. G. FURST, M.D., Lockhaven, Pa., died May 12, aged 28 years. He was a graduate of the University of Pennsylvania and for two years was connected with St. Joseph's Hospital in Philadelphia.

J. V. HARRIS, M.D., Canton, Ill., died May 7, aged 61 years. During the Civil War he served in the Sixty-fifth Ohio Vol. Inf. He was graduated from Rush Medical College, in 1871, and had since practiced in Canton.

C. W. SYDNOR, M.D., died in Stratsburg, Va., May 11, aged 67. He served as surgeon in the Stonewall Brigade of the Confederate Army.

ARCHIBALD MITCHELL, M.D., formerly a practitioner of Kingston, Mich., but lately a resident of Los Angeles, Cal., died May 17. He graduated from the Medical Department of the University of Michigan in 1872.

WILLIAM SOULE, M.D., Jewett City, Conn., died May 15, from injuries received by being thrown from his carriage five days before. He was born in Chaplain, Conn., August 24, 1827, and was graduated from Yale University in the Class of 1851.

CHARLES H. VOORHEES, M.D., Jefferson Medical College, 1850, died at his home in New Brunswick, N. J., May 13. He served in the Union Army during the Civil War, and was for a time in Libby Prison.

### DEATHS ABROAD.

We note the deaths of:

S. Saxtorph, professor of surgery at Copenhagen.

L. H. Petit, M.D., Paris, editor of *Revue de Tuberculose*.

G. Planchon, M.D., Supt. of Paris Ecole Sup. de Pharmacie.

P. Sgrosso, Privat-docent of ophthalmology at Naples.

E. van Millingen, professor of ophthalmology at Constantinople.

E. Grimaux, *agrégé libre* at the Paris Faculté de Médecine.

R. v. Limbeck, professor of internal medicine at Vienna, known for his research in experimental pathology.

Dr. Apostoli, of Paris, whose name has been so prominently connected with the application of electricity to gynecology.

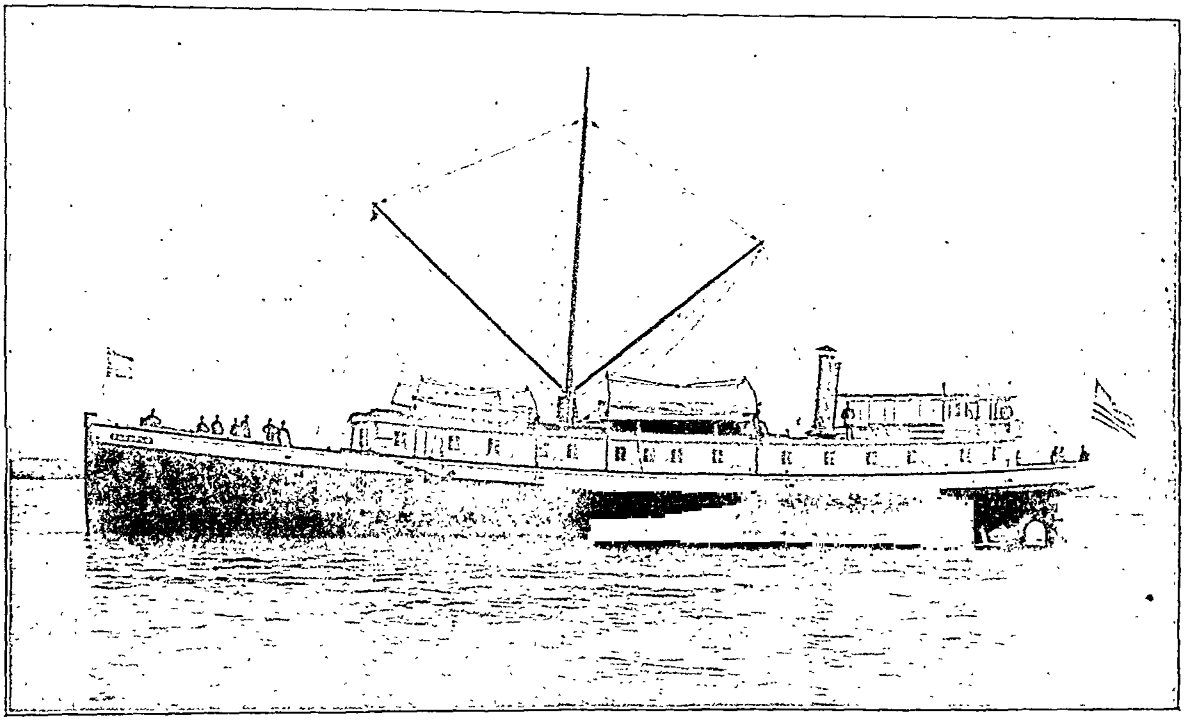
## Miscellany.

**Early Diagnosis of Tuberculosis.**—Landouzy compares the rectal temperature immediately after a walk of three or four hours in the afternoon and morning. If the temperature in the *afternoon* is higher than in the morning, he considers himself justified in affirming the existence of tuberculosis. Bozzolo also called attention, at the recent Antituberculosis Congress, to the significance of albuminuria as a precursor of tuberculosis, also of tachycardia *sine materia;* rheumatoid pains; certain forms of anemia, and zona.

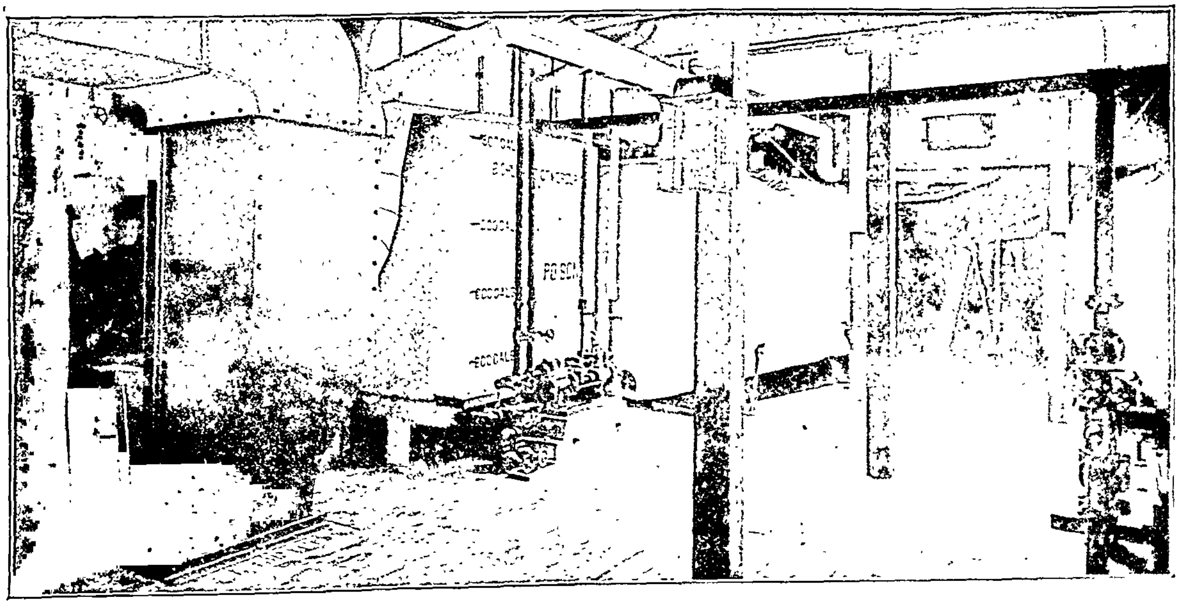
**Climate and Tuberculosis.**—Lannelongue's recent experience with guinea-pigs and climate is disconcerting, to say the least. As described in the *Semaine Méd.* of May 2, he inoculated 150 guinea-pigs on the same day, with cultures of the Koch bacillus, and under identical conditions; he sent 50 to the mountains, 50 to the seashore, and placed the remaining 50 in the laboratory cellar, where they were deprived of light and almost of air. The last-named batch survived the longest and in larger numbers. The same experiment was repeated twice on the same number and with the same results each time.

**Deprivation of Salt with Bromid Treatment.**—THE JOURNAL has referred to the advantages claimed by Richet and Toulouse for hypochloruration, as they call it, which is, reducing the amount of salt in the food during the treatment of epilepsy with bromids. They assert that the effect of the bromids is much enhanced by the absence of salt; and in a recent communication (*Jour. de Méd. de Paris*, April 29), Toulouse states that adults, as a rule, eat too much salt, and thus inflict unnecessary labor on their kidneys, and that more is needed with a vegetable diet than with a mixed one. He reports tests with a diet containing 2700 calories, 20 gm. nitrogen and 2.19 gm. salt. This was given to twenty adult epileptics, all old, established cases, for a period ranging from 21 to 208 days, while 1.7 to 5 of bromid was administered. The subjects did not appear to suffer in any way from the deprivation of their usual quantity of salt. The tabulated results of the tests show a remarkable decrease in the number of seizures during the hypochloruration, falling from 99 to 2; 25 to 0; 67 to 13; 47 to 2, etc., although in many instances a larger amount of bromid had been administered during the control period. In eight cases there were no seizures nor vertigoes after the first fifteen days of salt reduction.

**Disinfecting Steamer "Sanator."**—By courtesy of *Marine Engineering*, we present illustrations of the disinfecting steamer *Sanator*, for the U. S. Marine-Hospital Service. In the March number of this publication, C. M. Green, First Assistant Engineer R. C. S., Superintendent of Construction M. H. S., describes this vessel as an interesting example of unusual marine construction, just completed, for service at Havana. The *Sanator* is provided with the most improved disinfecting and fumigating machinery, the whole plant being a decided improvement on that of the *Protector*, which, during the fall of 1898, thoroughly demonstrated the efficacy of a floating disinfecting plant by its successful and rapid disinfection of troops and troop-ships at Montauk Point. The *Sanator* is undoubtedly the most complete floating disinfecting plant in the world, and is a low-powered steam vessel capable of making a maximum speed of eight knots an hour. Her hull is framed of Delaware oak, planked inside and out with yellow pine and decked with Oregon pine, the use of wood being necessary from the fact that a steel hull is quickly corroded by the solution of bichlorid, used in considerable quantities on the vessel and which can not be kept out of bilge. Her dimensions are as follows: Length over all, 161 ft. 6 in.; length from forward edge of stem to after edge of stern post, 149 ft. 11 in.; beam, extreme on water line, 32 ft.; depth of hold from top of deck beams at side to top of ceiling at keelson, 12 ft.; depth from top of main deck beams at side to top of keel, 13 ft. 3 in.; camber of deck beams, 6 in.; draft, normal, forward, 7 ft. 3 in.; draft, normal, aft, 8 ft. 3 in.; displacement, normal, 640 tons; displacement, tons per inch at L. W. L., 9.4 tons; distance center to center of frames, 26 in.; depth of keel below bottom planking, 9 in. There are two steam chambers located side by side for disinfecting, their forward ends projecting through the bulkhead into the infected compartment of the hold. They are cylindrical, about [illegible] in di

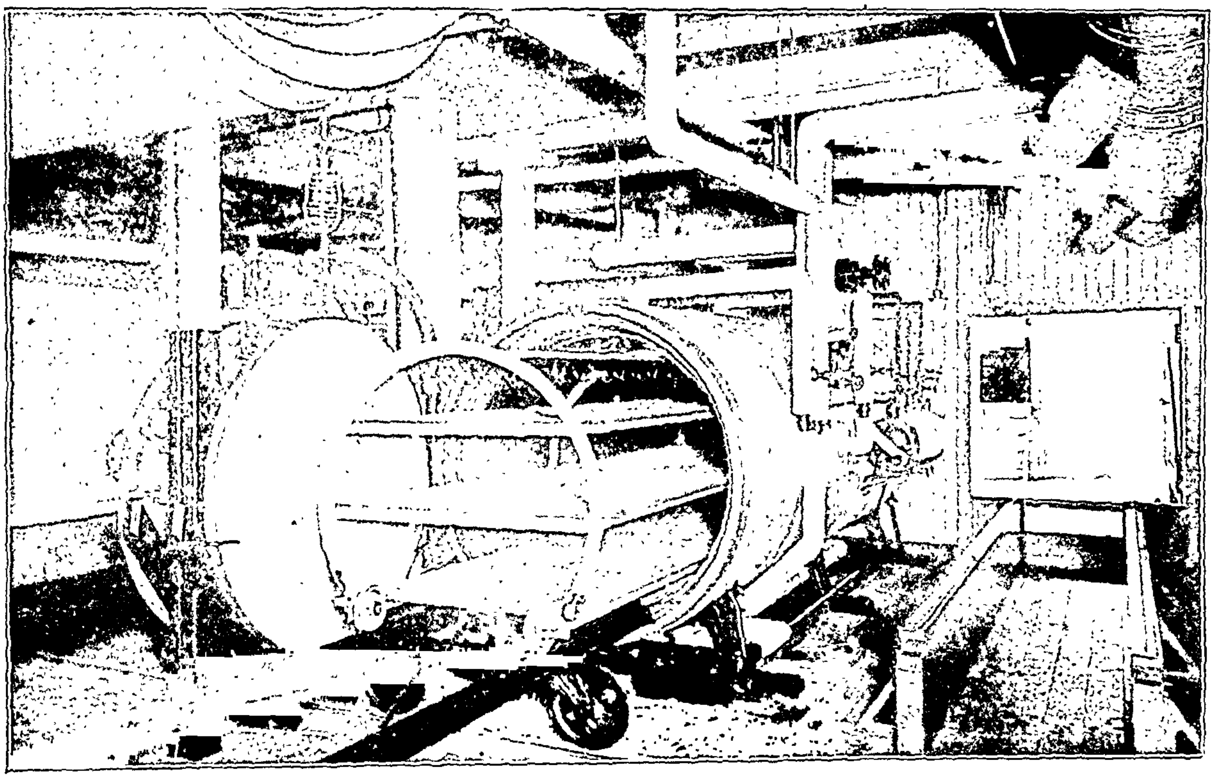


DISINFECTING STEAMER SANATOR FOR U. S. MARINE HOSPITAL SERVICE AT HAVANA, CUBA.



VIEW IN AFTER END OF HOLD OF S. S. SANATOR LOOKING TOWARD STARBOARD SIDE.

eter outside and sixteen feet long, and each is constructed with an inner and outer steel shell, these 1¾ inches apart, forming a steam jacket. The chambers are built to carry a working pressure of 10 pounds per square inch. They are covered with magnesia and fitted with a complete system of steam and exhaust pipes, drains and traps. Near the bottom and through each runs a double track of angle iron with movable extensions, to transfer-tables at both ends, and along these tracks can be moved cars of light wrought-iron construction containing the goods to be disinfected. These cars are provided with removable galvanized wire trays, brass hooks, and galvanized-wire folding baskets for use according to the character of the goods to be disinfected. They are loaded with infected goods or clothing while on the transfer-tables in the infected compartments, and then pushed into the steam chamber where the disinfection is accomplished, after which the doors of the chamber are opened and the cars brought out on the after transfer-tables and unloaded, the disinfected materials being then taken up the after hatch. The length of time for disinfection depends on various conditions, but usually occupies about thirty minutes for each chamber. Steam is kept in the jackets of the chamber during the operation so that the materials disinfected are thoroughly dried before being taken out. Four cars and four transfer-tables are provided. There is also an apparatus for generating formaldehyde gas and ammonia gas, and the vessel is to be provided with four Kinyoun-Francis autoclaves, which are portable formaldehyde gas generators and can be taken into the cabins or rooms of a vessel alongside, for disinfecting purposes. There are two sulphur furnaces in the forward hold compartments and sulphur bins holding forty barrels of sulphur. The bichlorid of mercury apparatus, an 1800-gallon steel tank, is located in the hold amidships on the starboard side, and above this in the deck house is a 40-gallon mixing tank with connections for steam and water, as well as a connection to the large tank below. The proper quantity of the chemical is mixed in the small tank and allowed to flow into the large one, into which has already been pumped a requisite quantity of water for making the solution. Then there is a pumping apparatus, and by means of a 2-inch hose, and spray nozzles, the solution can be sprayed even in any part of a vessel alongside..



AFTER-ENDS OF DISINFECTING CHAMBERS—CARRIAGE PARTLY RUN OUT IN FOREGROUND.

**Medical Women in Italy.**—Fifteen women graduated at the Italian universities between 1870 and 1897 in medicine and surgery, and one has been appointed "commune physician" at Montiglio, the first woman to fill this position. She is the daughter of Dr. Musso and completed her studies at Pavia and Zurich.

**Experiments on Human Beings.**—The recent discussion in the German Parliament, of Neisser's inoculations of a few prostitutes with syphilitic serum, was the occasion of a violent attack on the profession as a whole and denunciation of all experimental research, by a number of lay representatives of some prominence. Among those who replied, Ministerial Director Althoff, also a layman, protested against attributing to all, the faults of a few, and exclaimed: "The faults will nowhere meet with such severe disapproval as in medical circles, for physicians, in self-sacrifice and devotion to the welfare of suffering humanity, surpass all the other citizens of the state, and set them the noblest example." Virchow proclaimed the absolute necessity of finally testing remedies on man after conclusive tests on animals: "The conscience of the physician tells him what is right and what is wrong, and a code of ethics of the medical sciences is gradually being evolved, over the entire world, which as time goes on will prove more effective, more beneficent in its results, and be more respected than the deliberations of any peace conference." Kolle, in the *Deutsche Med. Woch.*, March 15, reviews various instances of experiments on man. The most audacious on record, and without any previous experience with animals, was the inoculation of millions of healthy persons in India with smallpox virus from patients with smallpox, which was practiced for centuries by the priests. A number of persons died as the results of these inoculations but the few were sacrificed for the benefit of the many, with the consent of the authorities. Jenner inoculated a healthy person with virus from an animal suffering from a disease the nature of which he only surmised, and Pasteur had the courage to inoculate a man with rabies. Mothers sometimes send their children "to catch the measles," and yet measles has quite a high mortality. Innumerable are the instances in which physicians have experimented on themselves, and Billroth used to say that the road to our successes leads over mountains of corpses. If laymen would divert their attention to charlatans, who, as has been shown by some recent occurrences, borrow from the medical arsenal and give mercury and other strong drugs in enormous, toxic doses, the world would be benefited, while these attacks on the regular profession tend to impair the confidence of the public in trained physicians and thus they fall an easy prey to ignorant, unscrupulous quacks.

**Alterations of the Skin in Lymphatic Leucemia.**—Histologic study of three cases at Neisser's clinic showed enormous deposits of lymphocytes in the interstices of the corium and subcutaneous tissue, sharply defined from the subpapillary vessels, with little mitosis, but with the lymph vessels filled with lymphocytes as in functioning lymph glands, while a lack of proliferation was evident in the lymph glands. Pinkus concludes that these accumulations of lymphocytes are not due to proliferation alone, but rather to a diminished consumption of lymphocytes. In his illustrated report in the *Arch. f. Derm.* (L, 1), he asserts that an emigration of the lymphocytes from the vessels is improbable, and that it is much more likely that the accumulation of cells is due to cell-division on the spot. In lymphatic leucemia a considerable portion of the lymphatic tissue throughout the body may proliferate and produce large tumors at certain predisposed points. The qualitative and not the quantitative alterations in the blood decide the diagnosis. He distinguishes four varieties: 1. True (smooth) leucemia tumors of the skin, never found except with lymphatic leucemia, and histologically identical with the alterations in the internal organs in this disease. 2. Kaposi's lymphodermia perniciosa. 3. Sarcoma and leucemia have frequently been observed associated, and in "round-celled tumors," leucemic depositum, lymphosarcoma of mycosis fungoides are differentiated by clinical appearance. 4. It is difficult to determine the connection between mycosis fungoides and leucemia. The affection known by this name in Germany has scarcely anything to do with leucemia, but in France a protracted, diffuse erythrodermia with violent pruritus, has been noted, always connected with lymphomatosis and finally leading to the development of tumors if the patient survives to this terminal stage. Pinkus is inclined to classify this with lymphodermia perniciosa, and identify it closely with leucemia, noting its characteristics as: 1, erythrodermia; 2, diffuse thickening of the skin, mostly in the face and leontiasic, occasionally actual tumor-formation, and 3, lymphocytemia coexisting or not appearing until the cutaneous phenomena have long existed.

## EXAMINATION QUESTIONS.

The following questions were presented at a recent examination of candidates for license to practice medicine in Illinois:

### ANATOMY.

1. Name and locate the muscles of the eyeball. 2. Locate and describe the ileocecal valve. 3. Give the origin and distribution of the median nerve. 4. Name the membranes of the brain and spinal column. 5. Describe the heart. 6. Give origin and insertion of the gastrocnemius muscle. 7. Describe the alimentary canal from the duodenum down. 8. Describe the arch of the aorta. 9. Name the articulations of the malar bone. 10. Describe the anterior tibial artery.

### BACTERIOLOGY AND PATHOLOGY.

1. How would you determine the presence of the tubercle bacilli in a specimen of sputum? 2. Give the characteristics of the bacillus tetani. 3. What are supposed to be elements of resistance or protective forces possessed by the human body against parasitic infections and intoxications? 4. Give the characteristics of the malarial organism. 5. Name the six pus cocci. 6. What is the pathology of chronic endocarditis? 7. What is the histologic structure of sarcomata? 8. What is the pathology of locomotor ataxia? 9. What are the blood changes in anemia? 10. What is thrombosis? What is embolism?

### CHEMISTRY.

1. What is analysis? 2. Define simple or elementary and compound matter. 3. What is the principal atom having linking function? 4. What two kinds of molecules can be chemically distinguished? 5. How are multiples of atoms expressed in chemical notation? Example. 6. What is a base? 7. What is the difference between an atom and a molecule? 8. When are traces of albumin indicative of renal lesion? 9. What is the function of hemoglobin? 10. Give Haines' test for sugar in urine.

### GYNECOLOGY.

1. Describe the minute structur[illegible] 2. Give the nerve and blood-supply of the [illegible] causes of sterility? 4. How would you g[illegible] . What is the treatment for acute pelvic [illegible] ild you diagnosticate a small subperitoneal [illegible] n a salpingitis? 7. Give the successive st[illegible] irettage of the uterus. 8. What are the causes of dysmenorrhea? 9. What disease of the uterus may result from childbirth? 10. What is the treatment for carcinoma of the uterus?

### HYGIENE.

1. Wells, cisterns, lakes and rivers are the usual sources of drinking water. In your judgment, from which of these sources is the water more desirable and why? 2. Name some of the sources of contamination of lake and river water. 3. Some of the sources of contamination of well and cistern water. 4. Give a concise statement of the means to which you would resort to prevent contamination of drinking water in the several ways mentioned. 5. Mention some of the more usual constituents that render drinking water unfit for use. 6. What bacilli usually found in water show evidence of fecal contamination? 6. What physical properties may drinking water present to the senses and yet be non-potable? 8. Give as full a list as you can of diseases traceable to water contamination. 9. Why are cases of typhoid fever rare in a new country, and why common in an old settled country? 10. In contrast to typhoid fever, why is malarial fever common in newly settled countries and relatively rare in old?

### MATERIA AND THERAPEUTICS.

1. Name four of the most important cardiac tonics and describe their physiologic action. 2. State the difference between a cholagogue and hepatic stimulant, also name examples of each. 3. Give the dose of fluid extract of ergot and describe its therapeutic action. 4. Name the alkaloids of nux vomica. 5. Describe the therapeutic and physiologic action of gelsemium and give the dose of the tincture. 6. What is Credé's ointment, and in what cases would you recommend its use? 7. Describe the action and use of bromoform, and give the dose for a child 2 years old. 8. What drugs contraindicate the use of oils and fats in case of poisoning? 9. What would you do in a case of poisoning with Paris-green? 10. Write a prescription for a child suffering from membranous croup and outline the general treatment.

### MEDICAL JURISPRUDENCE.

1. As regards cause, the subject of abortion has been divided into natural, artificial and criminal. A woman has aborted under somewhat suspicious circumstances. Name some facts that would induce you to think the abortion belonged to the class natural. 2. Some that would indicate the class artificial. 3. Some that would cause you to suspect criminal intent. 4. Name some conditions that would justify the bringing on of artificial abortion, what authority should be secured? 6. In case of death following criminal abortion how would you go about establishing the fact? That is, what proofs would you expect to find? 7. An infant, evidently of recent birth, is found dead. A woman is produced who is said to be its mother. In case of an examination what proof would you expect to find in the alleged mother's condition? 8. And in the event the mother had meantime died, what further proofs of maternity upon post-mortem would you expect to find? 9. To satisfy a legal inquiry it is sometimes necessary to ascertain whether a woman has borne children at a more or less remote period. How could this fact be proven? 10. How soon can one pregnancy follow another? And what is the shortest time on record between two conceptions?

### OBSTETRICS.

1. What are the blood changes in pregnancy? 2. What is the treatment of varicose veins in pregnancy? Which vein is always first affected? 3. What are the varieties of uterine contractions? 4. What is the danger if the external and internal os uteri contract without the uterus contracting itself? 5. How would you assist in delivering the head, pelvic presentation? 6. What is "hour-glass" contraction of the uterus? How would you treat such a case? 7. What is retroversion of the uterus? What are the effects of retroversion and what is the treatment? 8. What would you do if the head was arrested in the inferior strait, pelvic presentation? 9. How would you diagnose a case of shoulder presentation? How would you treat such a case? 10. What is placenta previa? Give treatment.

### PHYSIOLOGY.

1. From what layer or layers of the blastoderm is the liver developed? 2. What nerves control the action of the heart? 3. Give the minute anatomy of the large intestine. 4. Describe the colored and colorless blood-corpuscles: *a.* As to proportion. *b.* As to si[illegible] *c.* As to function. 5. Describe the respirato[illegible] and tissues. 6. Describe the nervous [illegible] 7. Give summary of the digestive ch[illegible] ie. 8. Describe the two kinds of supporting material for the medullated nerve-fibers of the white matter of the spinal cord. 9. Name the different columns and tracts of the spinal cord and which are of ascending and descending degeneration. 10. Give in full, the distribution of the gray matter in both brain and cord.

### PRACTICE.

1. Name the diseases with which uremia may be confounded and give diagnosis and treatment. 2. Give causes, symptoms and treatment of acute neuritis. 3. Etiology, pathology and physical signs of eccentric hypertrophy of the heart. 4. Give the differential diagnosis between serofibrinous pleurisy, lobar pneumonia and [illegible] of the lung. 6. Chronic dilation of the [illegible] ysical signs, symptoms and treatment. 7. How would you diagnose a case of bubonic plague? 8. Give the differential diagnosis between variola and varicella and outline the general treatment of the former. 9. The causes, symptoms, complications and differential diagnosis of scarlatina. 10. Write what you know of cirrhosis of the liver.

### SURGERY.

1. What is hydrocele? Give treatment. 2. What are the main treatments of fractures? 3. What is adhesion and what is effusion? 4. What are aneurysms? How do you treat them? 5. What are the indications for ovariotomy? 6. How do you treat lateral curvature of the spine? 7. Enumerate the different classes of fractures. 8. What is Pott's disease? Give treatment. 9. What symptoms characterize joint wounds? Outline your treatment. 10. Describe amputation of the knee-joint, lateral flap operation.

## NEW PATENTS.

Patents granted of interest to physicians, May 1-8.

649,035. Apparatus for making extracts. Frederic A. Anderson, London, England.

649,284. Making meat extracts. Henry J. Dunn, London, England.

649,237. Fracture apparatus. Charles F. Dyson, Hiram, Ohio.

649,202. Apparatus for making barium oxid, Walther Feld, Lintz-on-the-Rhine, Germany.
640,305. Medicinal compound and making same, Ludwig O. Helmers, Hamburg, Germany.
649,062. Disinfecting device, Louis and M. H. Levett, New York City.
32,637. Design, Syringe, Samuel C. Stearns, Detroit, Mich.
649,718. Surgical splint, Lorenz A. Deuther, Buffalo, N. Y.
649,826. Medicated hat-pad, Byron A. Eldred, Boston, Mass.
649,692. Vesicant, Heinrich Helbing, London, England.
649,521. Medicated vapor injector, Hosea W. Libbey, Boston, Mass.
649,646. Umbilical truss, David S. Plum, El Dorado, Cal.
649,493. Surgical instrument, Frederick A. Stohlmann and L. G. Pfarre, New York City.
32,665. Design, massage instrument, Daniel B. Stevens, Toronto, Ont.

# Queries and Minor Notes.

### PRACTICE IN MEXICO.

Chicago, May 20, 1900.

*To the Editor:*—Will you kindly inform me as to the requirements for the practice of medicine in Mexico, and oblige, B. R.

Answer.—A foreigner, in order to be allowed to practice in Mexico with full legal privileges—signing birth and death certificates, etc.—must pass the full examination that is required of a Mexican graduate; this examination, in the foreigner's case, is likely to be rigid, and is in the Spanish language. A full account of the requirements was given in The Journal of Dec. 23, 1899.

# The Public Service.

### ARMY CHANGES.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., May 11 to 17, 1900, inclusive:

Charles Bruning, acting asst.-surgeon, previous orders directing him to proceed from New Orleans, La., to Tampa, Fla., and thence to Havana, Cuba, revoked.

### NAVY CHANGES.

Changes in the Medical Corps of the U. S. Navy for the week ending May 19, 1900.

Asst.-Surgeon J. C. Thompson, detached from the *Bennington* and ordered to naval hospital, Mare Island, Cal., for treatment.

Asst.-Surgeon E. O. Huntington, detached from the *Newark* and ordered to the *Bennington*.

### MARINE-HOSPITAL CHANGES.

*Official list of the changes of station and duties of commissioned an non-commissioned officers of the U. S Marine-Hospital Service for the seven days ending May 10, 1900.*

Surgeon Preston H. Bailhache, granted leave of absence for 10 days from May 25.

Asst.-Surgeon J. O. Cobb, directed to rejoin station at Fort Stanton, N. M., visiting Liberty and Saranac Lake, N. Y., and Rutland, Mass., en route.

Asst.-Surgeon John W. Kerr, relieved from duty at San Francisco quarantine and directed to proceed to Hongkong, China, for duty.

Asst.-Surgeon C. W. Vogel, relieved from duty at Immigration Depot, New York City, and directed to proceed to San Francisco quarantine, Cal., and report to the medical officer in command for duty and assignment to quarters.

Asst.-Surgeon J. W. Amesse, relieved from duty at Detroit, Mich., and directed to proceed to Honolulu, H. I., and report to Surgeon D. A. Carmichael for duty.

Asst.-Surgeon A. J. McLaughlin, relieved from duty at Stapleton, N. Y., and directed to report to the medical officer in command, Immigration Depot, for duty.

Asst.-Surgeon B. H. Earle, relieved from duty at Chicago, and directed to proceed to Detroit, Mich., and report to the medical officer in command for duty and assignment to quarters.

Asst.-Surgeon B. J. Lloyd, relieved from duty at Mobile, Ala., and directed to proceed to Chicago, Ill., and report to the medical officer in command for duty and assignment to quarters.

Asst.-Surgeon John D. Long, relieved from duty at Boston, Mass., and directed to proceed to Stapleton, N. Y., and report to the medical officer in command for duty and assignment to quarters.

Acting Asst.-Surgeon E. E. Field, granted extension of leave of absence for two days.

Hospital Steward Charles W. Stephenson, relieved from duty at Chicago and directed to proceed to Evansville, Ind., and report to the medical officer in command for duty and assignment to quarters.

### HEALTH REPORTS.

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended May 19, 1900.

#### SMALLPOX—UNITED STATES

Alabama: Mobile, May 5-12, 2 cases.
Indiana: Evansville, May 5-12, 2 cases.
Kansas: Wichita, May 5-12, 4 cases.
Kentucky: Covington, May 5-12, 2 cases.
Louisiana: New Orleans, May 5-12, 57 cases, 14 deaths.
Maine: Portland, May 5-12, 1 case, 1 death.
Massachusetts: Chicopee, May 5-12, 1 death.
Michigan: Detroit, May 5-12, 2 cases.
Nebraska: Omaha, May 5-12, 6 cases.
Ohio: Cleveland, May 5-12, 19 cases, 1 death.
Pennsylvania: Pittsburg, May 5-12, 2 cases.
South Carolina: Greenville, May 5-12, 3 cases.
Utah: Salt Lake City, May 5-12, 2 cases.
Washington: Tacoma, April 28 to May 5, 1 case.
Wyoming: Sweetwater Co., May 4, 6 cases; Uintah Co., May 4, 4 cases.

#### SMALLPOX—FOREIGN.

Austria: Prague, April 22-28, 16 cases.
Belgium: Antwerp, April 22-28, 1 case, 1 death.
Canada: Manitoba, Winnipeg, April 1 to May 12, 11 cases 1 death; Quebec, Bonaventure Co., May 4-11, 5 cases.
China: Hongkong, March 22 to April 7, 6 cases, 3 deaths.
England: Liverpool, April 22-28, 9 cases, 3 deaths; London, April 22-28, 6 cases, 1 death; Southampton, April 28 to May 5, 5 cases.
France: Lyons, April 14-21, 2 deaths.
Gibraltar: April 22-28, 8 cases, 2 deaths.
Greece, Athens, April 22-28, 8 cases, 2 deaths.
India: Bombay, April 10-17, 72 deaths; Calcutta, March 25, 39 deaths; Kurrachee, April 8-15, 12 cases, 9 deaths.
Italy: Rome, March 22 to April 7, 2 deaths; Venice, April 14-21, 1 death.
Japan: Formosa, Tamsui, March 24-31, 134 cases, 2 deaths.
Mexico: Chihuahua, April 28 to May 5, 1 death; Mexico, April 1-29, 57 cases, 42 deaths; Vera Cruz, April 28 to May 5, 8 deaths.
Spain: Corunna, April 22-28, 1 death.
Russia: Moscow, April 7-21, 5 deaths; Odessa, April 22-28, 7 cases, 2 deaths; St. Petersburg, April 14-21, 31 cases, 9 deaths; Warsaw, April 14-21, 2 deaths.
Scotland: Glasgow, April 22-28, 19 cases, 2 deaths.
Spain: Valencia, April 22-28, 1 case.

#### YELLOW FEVER.

Cuba: Havana, May 7, 1 case.
Mexico: Vera Cruz, April 28 to May 5, 10 deaths.

#### CHOLERA.

Arabia: Oman, March 10, present.
India: Bombay, April 10-17, 26 deaths; Calcutta, March 18-24, 101 deaths.

#### PLAGUE.

Egypt: Alexandria, May 9, reported.
India: Bombay, April 10-17, 533 deaths; Calcutta, March 18-24, 878 deaths; Kurrachee, April 8-15, 480 cases, 402 deaths.
Japan: Formosa, Tamsui, March 24-31, 106 cases, 74 deaths; Osaka, April 13, 1 death.
New Caledonia, Numea, Dec. 17 to April 4, 123 cases, 77 deaths.

### CHANGE OF ADDRESS.

Dr. C. T. Allen, from Shiloh to Tobaccoport, Tenn.
Dr. L. P. H. Bahrenburg, from Pemberville, Ohio, to 19th Ave. and 83d St., Bath Beach, Brooklyn, N. Y.
Dr. S. B. Bennett, from Fair View to Galesburg, Ill.
Dr. G. F. Butler, from Chicago, Ill., to Alma, Mich.
Dr. C. M. Braidwood, from Detroit to Lapeer, Mich.
Dr. A. Cornelius, from 589 Van Buren to 525 S. Robey St., Chicago.
Dr. H. Cook, from 155 Adams St. E., Detroit to Pewamo, Mich.
Dr. O. N. Carter, from Sandidges, Va., to Lebanon, Mo.
Dr. H. F. Connally, from McGregor to Bruceville, Texas.
Dr. P. T. Conlan, from Omaha to Columbus, Neb.
Dr. M. H. Coan, from Wyandotte to Leslie, Mich.
Dr. W. R. Cothern, from 354 S. Hoyne St., Chicago to Melvin, Illinois.
Dr. H. C. Castor, from 340 to 184 N. State St. Chicago.
Dr. S. T. Carswell, from Homerville to Fowlstown, Ga.
Dr. J. H. Dyer, from Shelbyville to Wartrace, Tenn.
Dr. W. E. Duncan, from 603 W. 63d St., to 6058 Kimbark Ave., Chicago.
Dr. D. W. Detwiler, from 2099 Harvard St., to 1800 Wabash Ave., Chicago.
Dr. W. E. Frank, from Trivoli to Itasca, Ill.
Dr. J. F. Fox, from Redland to Muldrow, I. T.
Dr. J. K. Frankish, from Philadelphia to Gwynedd, Pa.
Dr. O. A. Fliesburg, from 102 Washington Ave., South to 1312 7th St., South, Minneapolis, Minn.
Dr. A. F. Griggs, from Atlanta, Ga., to 2027 3d Ave., Birmingham, Ala.
Dr. E. Gleitsman, from 654 N. Hoyne Ave., to 710 Fullarton Ave., Chicago.
Dr. W. A. Hibbs, from Delphos, Kans., to Lead, S. D.
Dr. D. W. Jones, from Port Gibson to Hermanville, Miss.
Dr. F. G. Johnson, from Brooklyn to Paoli, Wis.
Dr. T. W. Little, from Long Grove to Morley, Iowa.
Dr. B. F. Long, from Baltimore, Md., to McCoysville, Pa.
Dr. V. F. Lassagne, from Chicago to Eureka Springs, Ark.
Dr. J. Pedden, from Detroit to Petoskey, Mich.
Dr. W. M. Phelps, from 529 Van Buren to 120 De Kalb St., Chicago.
Dr. A. B. Perkey, from Presbyterian Hospital to 393 S. Leavitt St., Chicago.
Dr. W. C. Ramsey, from Everett Block, Akron to Hopedale, Ohio.
Dr. G. P. Ramsey, from Crawfordsville to Newtown, Ind.
Dr. W. A. Scott, from Thomasville, Ala., to Swanton, Ohio.
Dr. W. T. Seymour, from Polo, Ill., to Reedsburg, Wis.
Dr. I. J. Spear, from 2338 Eutaw St., to Bay View Asylum, Insane Department, Baltimore, Md.
Dr. Le Roy Southmayd, from Virginia City to Great Falls, Mont.
Dr. F. E. Stewart, Care Merck & Co., from New York City to 67 Prospect St., East Orange, N. J.
Dr. E. B. Schrock, from Ostrander to Yellow Springs, Ohio.
Dr. H. C. Snitcher, from Colorado Springs to Denver, Colo.
Dr. J. A. Tyler, from 229 N. Champion to 221 N. 6th St., Columbus, Ohio.
Dr. C. A. Thixton, from 1617 to 1707 Preston St., Louisville, Kentucky.
Dr. N. A. Upchurch, from Moniac, Ga., to Summerfield, Fla.
Dr. W. C. Wessell, from Burksville, Ill., to Warrenton, Mo.
Dr. O. J. Westlake, from City Hospital to 408 E. 12th St., Kansas City, Mo.
Dr. J. F. Wilson, from 144 65th St., to 6424 Sangamon St., Chicago.

# Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

### Philadelphia Medical Journal, May 12.

1.—*Scarlatina Miliaris. J. P. Crozer Griffith.
2.—*Pruritus Ani, with Especial Reference to its Local Treatment. Lewis H. Adler, Jr.
3.—*Relation of Diseases of the Nose and Throat to Life-Expectancy. E. Fletcher Ingals.
4.— Alarming Hemorrhage Controlled by Hemostatic Forceps Left on the Vessel; Wound of Femoral Vein Controlled by Means of Hemostatic Forceps; Gangrenous Omental Hernia with Practically no Constitutional Symptoms; Amputation of all Toes of Both Feet for Dry Gangrene; Removal of 280 Grains of White Wax from Male Urinary Bladder. Orville Horwitz.
5.— Remarks to the General Practitioner Regarding the Pessary. Frank C. Hammond.
6.—*Intestinal Indigestion and its Consequences. (*Continued.*) William H. Porter.

### Cincinnati Lancet-Clinic, May 12.

7.— Sensory Nerves of the Genitals. Byron Robinson.
8.— The New Medical Law, etc. N. P. Dandridge.
9.—*Treatment of Internal Hemorrhoids. George J. Monroe.

### New York Medical Journal, May 12.

10.—*Study of Application of Galvano-Cautery in Nose. Beaman Douglass.
11.— Kyphotone, or Modified Plaster-jacket Stool for the Correction of Humpback. R. Tunstall Taylor.
12.—*General Remarks on Pathology and Treatment of Stricture of Urethra. Charles Greene Cumston.
13.—*Technique of Lumbar Puncture. Lewis A. Conner.
14.—*Treatment of Hay Fever by Suprarenal Gland. Beaman Douglass.
15.— Another Case of Typhoid Infection without Intestinal Lesions, with Positive Widal Reaction. W. Ophuls.
16.— Cystitis. Henry H. Morton.

### Medical Record (N. Y.), May 12.

17.—*Bottini's Operation for Cure of Prostatic Hypertrophy. Report of Cases. Willy Meyer.
18.—*Modern Treatment of Diabetes Mellitus. Frederick Kraus, Jr.

### Medical News (N. Y.), May 12.

19.—*Functional and Organic Heart Murmurs in Infancy and Childhood. Abraham Jacobi.
20.— Perforating Duodenal Ulcers. (*Concluded.*) Robert F. Weir.
21.— Metal Roller Water Tank for Application of Heat or Cold (Counterirritation). Robert Coleman Kemp.

### Boston Medical and Surgical Journal, May 10.

22.—*Adaptation of Pathogenic Bacteria to Different Species of Animals. Theobald Smith.
23.—*Bacteriotherapeutics, with Especial Reference to Tuberculosis. Edward R. Baldwin.
24.—*Relation of Bacteriology to Medicine. Richard C. Cabot.
25.—*Ideal Ration for Army in Tropics. (*Continued.*) Edward L. Munson.

### Medical Review (St. Louis, Mo.), May 12.

26.—*Use and Abuse of Phosphorus. L. Harrison Mettler.
27.—*Treatment of Influenza. W. L. Johnson.
28.— Difficult Case of Narcosis. George C. Crandall.

### American Practitioner and News (Louisville, Ky.), March 15.

29.—*Etiology of Acute Diffuse Pneumonia. William N. Beggs.

### American Practitioner and News (Louisville, Ky.), April 1.

30.— Surgical Treatment of Suppurative Pericarditis. John A. Ouchterlony.
31.— "Two Terrible Examples." Giffard Knox.
32.— Valedictory Address at University of Louisville. Ezekiel Merrill Bartlett.

### Virginia Medical Semi-Monthly (Richmond), April 13.

33.— The Negro. His Environments as a Slave; His Environments as a Freedman. John Herbert Claiborne.
34.— Report of Two Cases. 1, A Miscarriage; 2, A Retro-Displaced Pregnant Uterus. Walker B. Gossett.
35.—*Clinical Aspects of Infantile Diarrhea. J. W. P. Smithwick.
36.— Medicinal and Surgical Treatment of Abscesses, with Clinical Histories. Eugene C. Underwood.
37.— Phenocoll Hydrochlorid in Malaria. L. H. Warner.
38.— Clinical Microscopy in Diseases of Respiratory Organs. H. Stuart MacLean.
39.— Difference in Cause, Symptoms, Results and Treatment of Grip and Cold. Wm. S. Gordon.

### Railway Surgeon (Chicago), April 17.

40.— Diseases of Lungs the Result of Trauma. D. S. Fairchild.
41.— Don't be in a Hurry to Amputate. J. R. Hollowbush.
42.— Minor Casualty Surgery; Ideals of Treatment and Results. H. L. Getz.
43.— Traumatic Popliteal Aneurysm. J. T. Dunn.

### Annals of Surgery (Philadelphia), May.

44.—*Two Cases of Esophageal Diverticulum, with Remarks. Maurice H. Richardson.
45.—*Postdiphtheritic Stenosis of Larynx (Retained Intubation Instruments and Retained Tracheal Canulæ). John Rogers, Jr.
46.—*Contribution to Surgery of Stomach, Including Wounds, Gastrostomy, Gastroenterostomy and Gastrectomy. H. Beeckman Delatour.
47.—*Report of Case of Recovery after Ligation of First Portion of Right Subclavian Artery for Aneurysm of Third Portion. A. E. Halstead.
48.— Complete External Dislocation at Elbow. Randolph Winslow.
49.— Report of Case of Actinomycosis Hominis of Lungs. James B. Bullitt.
50.— Report of Case of Superficial Bilateral Gangrene with Asymmetrical Lesions. George F. Wilson.
51.— Dislocation at Shoulder Complicated by Fracture through the Anatomical Neck of the Humerus. Charles Brooks Brigham.

### Journal of Cutaneous and Genito-Urinary Diseases (N. Y.), May.

52.—*Report of Ten Cases of Vesical Tumors, with Some Remarks upon the Cleansing of Foul Bladders and the Technic of Suprapubic Cystotomy. Granville MacGowan.
53.—*Tuberculosis of the Skin in a Physician from Accidental Inoculation. Jay F. Schamberg.

### Medicine (Detroit, Mich.), May.

54.—*Plea for More Attention to Sense Organs, Especially the Eye. J. G. Huizinga.
55.—*Significance of Albuminuria. Orville A. Kennedy.
56.—*Diagnosis of Different Forms of Malarial Fever. Albert Woldert.
57.—*Electrocautery in Nose and Throat Diseases. S. G. Dabney.
58.—*Pancreatic Digestion from Standpoint of Comparative Anatomy of the Bile and Pancreatic Ducts in Mammals. B. K. Rachford.

### Medical Standard (Chicago), May.

59.— Syphilis: Phenomena and Management. William S. Gottheil.
60.— Pyonephrosis; Nephropexy; Traumatic Epiphyseal Lesions; Osteomyelitis, etc. Nicholas Senn.
61.—*Preliminary Remarks to Discussion of Tuberculosis. Charles Denison.
62.— Rötheln, or German Measles. Marcus P. Hatfield.
63.— Contused and Perforating Injuries of Eyeball, with Report of Cases. Thomas A. Woodruff.
64.— Diagnosis of Heart Diseases. Albert Abrams.
65.— Hemorrhage and Circulatory Disturbances in Complicated Fracture. Thos. H. Manley.

### Annals of Otology, Rhinology and Laryngology (St. Louis, Mo.), February.

66.—*Contribution to Pathologic Histology of Hyperkeratosis Lingualis. (Hairy Tongue.) J. L. Goodale.
67.—*Cysts of External Auditory Canal; Report of Case. Lewis S. Somers.
68.—*Use of Suprarenal Extract in Diseases of Nose and Throat. W. H. Bates.
69.— New Instruments for Correction of Irregularities of Nasal Septum. Henry W. Wandless.
70.— Some Improved Nose, Throat and Ear Instruments. Edwin Pynchon.
71.— Osteoma of Auditory Canal. Thomas R. Pooley.

### Indiana Medical Journal (Indianapolis), April.

72.— Several Unusual Cases of Skin Disease Observed in Indianapolis. A. W. Brayton.
73.— Osteosarcoma of Thigh and Lung; Cystic Tumor; Destruction of Speech Center. John E. Harris.

### Brooklyn Medical Journal, May.

74.— Dispensary Experiences. F. S. Kennedy.
75.—*Some Points in Chemistry of Cow's Milk, with Reference to Infant Feeding; with Description of Method for Home Modification of Cow's Milk. E. H. Bartley.
76.—*Consideration of Radical Treatment of Hemorrhoids. Wm. F. Campbell.
77.—*Alcoholism and its Treatment. L. J. Morton.

### Obstetrics (N. Y.), April.

78.— External Cephalometry Applied to Artificially Induced Labor. M. Perret.
79.— Albuminuria of Pregnancy. Samuel G. Dabney.

### Western Medical Review (Lincoln, Neb.), May 5.

80.—*Hot Bath as Aid in Abdominal Diagnosis. George Dock.
81.—*Intraligamentous Growths. Thomas H. Hawkins.
82.— Clinic at Jefferson Medical College Hospital. H. A. Hare.
83.— New Method of Suturing Internal Ring in Operations for Inguinal Hernia. Leonard Freeman.
84.— Application of Our New Law. J. G. Johnston.
85.—*Longitudinal Wire Suture in Radical Operation for Hernia. M. L. Harris.
86.— Report of Some Cases in my Practice. M. A. Hughes.
87.— Abortion. (*Concluded.*) A. D. Wilkinson.

### St. Louis Clinique, May.

88.— Faculty's Valedictory. St. Louis College of Physicians and Surgeons. George H. Thompson.
89.— Some Newer Therapeutic Agents. (*Continued.*) C. W. Lillie.
90.— Treatment of Ulcers. H. C. Allen.

### Kansas City Medical Index-Lancet, May.

91.— Annual Address before the Western Surgical and Gynecological Association at Des Moines, Ia., Dec. 28, 1899. H. C. Crowell.
92.— Diphtheria and Membranous Croup. J. W. Lane.
93.— Quinalgen (Analgen.) A. M. Wilson.
94.— X-Ray as an Aid in Diagnosis of Tuberculosis of Lung. J. N. Scott.
95.—*Remarks on Chorea, its Pathology and Treatment. John Punton.

### Kansas City Medical Record, April.

96.— Treatment of Female Pelvic Diseases in Country Practice. E. N. Miller.

### Colorado Medical Journal, April.

97.—*Pulmonary Complications of Typhoid Fever. Carroll E. Edson.
98.—*Is Change of Climate a Necessity for Successful Treatment? Charles Denison.

99.—*Causes and Treatment of Acute Coryza. Melville Black.
100.— Prevention of Diseases of Eye During Childhood. E. W. Stevens.
101.— Dame Nature's Vaginal Hysterectomy. Calvin Skinner.

### Louisville Monthly Journal of Medicine and Surgery, May.

102.— Tubercular Peritonitis. James B. Bullitt.
103.— Talipes Equino-Varus. Irwin Abell.
104.— Observations on Lithemia. (*Continued.*) Arch. Dixon, Jr.
105.— Report of Surgery. (*Continued.*) H. Horace Grant.
106.— Systematic Anesthesia of Chloroform and Ether: Practical Points from Personal Experience of 2300 Cases. James W. Guest.

### Woman's Medical Journal (Toledo, Ohio), April.

107.—*The Therapeutic Uses of Yeast. Elsie Reed Mitchell.
108.— Aphasia. Jennie Lyon.
109.— Short Umbilical Cord; Report of Cases. Helen Post Wilson.
110.— Femoral Hernia with Report of Two Cases. J. Lillian McBride.

### Medical Summary (Philadelphia), May.

111.— Symptoms of Hysteria. Arthur E. Strong.
112.— Let the Druggist Prescribe. J. W. Lockhart.
113.— Treatment of Catarrhal Pneumonia in Children. Eugene C. Underwood.
114.— Sanitary and Hygienic Sermon for the Country Doctor. A. T. Cuzner.
115.— Syphilis. (*Continued.*) Wm. V. Wilson.
116.— Cerebrospinal Meningitis. Drs. Pennebaker and Tripp.
117.— Symptomatology and Treatment of Septicemia. J. W. P. Smithwick.
118.— Remonstrance. Reminiscence and Remarks. Geo. H. Candler.

### St. Louis Courier of Medicine, April.

119.—*Post-febrile Insanities, Relating Particularly to La Grippe and Typhoid Fever. J. K. Bauduy.
120.—*The So-Called Fetal Theory of the Cause of Eclampsia. P. C. T. Von Der Hoeven.
121.—*Preliminary Report on Etiology of Scarlatina. R. B. H. Gradwohl.

### Iowa Medical Journal (Fort Dodge), April.

122.— Gastro-Intestinal Disorders of Children. W. S. Lessenger.

### Buffalo Medical Journal, May.

123.—*Rational Steps in Treatment of Nervous Prostration, Headache and Neuralgia. (*Concluded.*) Ambrose L. Ranney.
124.—*The Missile and the Weapon. A. L. Hall.
125.— Unusual Conditions of Skin and Kidneys Following an Operation for Appendicitis. W. G. Taylor.
126.— On a Form of the Haab Magnet. Lucien Howe.
127.— Chronic Suppuration of Middle Ear and Chronic Empyema of Nasal Accessory Sinuses. Frank Whitehall Hinkel.

### Medical Dial (Minneapolis, Minn.), May.

128.— Three Interesting Patients for a Recent Graduate. H. Bowman.
129.— The Trained Nurse. Christine Williams.

### St. Paul Medical Journal, May.

130.—*Practical Method of Estimating Directly the Quantity of Hemoglobin. T. W. Tallquist.
131.— Bacteriological Diagnosis of Diphtheria in Minnesota. F. F. Wesbrook.
132.—*Pernicious Anemia, with Report of Case. Charles R. Ball.
133.—*Observations on 1092 Cases of Anesthesia from Jan. 1899, to Jan. 1, 1900. Alice Magaw.
134.— Tubercular Epididymitis with Report of Case. Marcus Tessler.
135.— Foreign Body Left in Abdominal Cavity During Celiotomy; Fecal Fistula; Recovery. S. S. Hesselgrave.
136.— Pulmonary Tuberculosis, with Gangrene of Leg. Henry Jackson.

### Peoria Medical Journal, April.

137.— Influenza and Complications. H. H. Whitton.
138.— Herpes Zoster Frontalis. R. E. Lewis.

### Medical Register (Richmond, Va.), April.

139.— Present Status of Insanity in Virginia. Wm. Francis Drewry.
140.— Grip Lung. John L. Dawson.
141.— Comparative Study of Nerve. Charles M. Hazen.
142.— Use and Abuse of Blisters. Wm. P. Mathews.
143.— Injuries to Skull, with Report of Some Recent Cases. Lewis C. Bosher.
144.— Tuberculosis of Bone. A. B. Greiner.

### Medical Sentinel (Portland, Ore.), April.

145.— Gall-Stone Fragments. Kenneth A. J. Mackenzie.
146.— Epidemic in Eastern Oregon. Olive Hartley.
147.— Quarantine. Titus C. Briggs.
148.—*New Method of Relief for Facial Neuralgia. W. C. Belt.

### Southern Medical Journal (La Grange, N. C.), April.

149.— Incompatibility. E. A. Ruddiman.
150.— Report of Some Interesting Cases with Remarks Thereon. J. W. P. Smithwick.
151.—*Clinical Aspect of Infantile Diarrhea. J. W. P. Smithwick.

### Medical and Surgical Bulletin (Nashville, Tenn.), April.

152.— Hodgkin's Disease, with Report of Case. E. G. Wood.
153.— Valedictory. Professional Life of Dr. Marion Sims. J. R. Fleming.

### Medical Fortnightly (St. Louis, Mo.), May 10.

154.— Medical Laws and Medical Organization in Illinois. W. T. Moffett.
155.— Efficiency of Our Health Laws. S. T. Hurst.
156.— Treatment of Incipient Phthisis, with Clinical Reports. Robert C. Kenner.
157.— Cancer of Rectum in Female, with Report of Case. Wallace K. Oakes.
158.— Abortion, its Cause and Treatment. C. W. Price.
159.— Observations on Obstetrics. J. B. O'Neil.
160.— Care of Eyes of New-Born. J. F. Hill.
161.— Climatic Treatment of Tuberculosis. George M. Randall.

### Annals of Gynecology and Pediatry (Boston), April.

162.— Operative Indications in Cases of Fibroma Complicated by Pregnancy. D. Delagenière.
163.— Two Cases of Sporadic Cretinism. John Lovett Morse.

### Dominion Medical Monthly (Toronto, Can.), April.

164.— Case of Smallpox Recently Discharged from Isolation Hospital in this City. J. G. Lamont.

### Hot Springs Medical Journal (Ark.), April.

165.— Value of Prostatic Examination. J. Leland Boogher.
166.— Treatment of Pulmonary Tuberculosis by Inhalation of Antiseptic Nebulæ. Homer Thomas.

## AMERICAN.

1. **Scarlatinal Miliaria.**—After noticing this peculiar eruption in scarlatina and reporting cases, Griffith suggests that the often expressed view that miliaria is an indication of severity in scarlatina may not be tenable, as there seems to be no connection between the two. Apparently different causes act to produce the efflorescence and the vesiculation and, contrary to the opinion of certain writers, there seems to be no necessary relation between the amount of scarlatinal peeling and the degree of miliarial eruption. He favors the view of Thompson, that the development of miliaria in scarlatina depends largely on some pecularity of the skin rather than on any intensity of the scarlatinal rash or other factor, and the observation of Henoch, as to a family tendency to miliaria in scarlatina seems to support this view. It is possible to have embarrassment of diagnosis from miliarial eruption in scarlatina, and in one of his cases the presence of other instances of the disorder was the leading factor deciding the diagnosis.

2.—See abstract of this article in our Therapeutics Department of this week.

3. **Nose and Throat Diseases in Life Insurance.**—Ingals concludes, from a study of the facts, that examinations of the nose and throat will not usually aid the life insurance examiner, but that in a limited number of cases it may cause him to reject persons otherwise acceptable, who are likely to develop diseases within a short time that will greatly reduce their expectancy of life. Hence such examination should be made whenever the personal or hereditary history and the general appearance or quick pulse leads the examiner to suspect the beginning of pulmonary or cardiac disease.

6. **Intestinal Indigestion.**—Porter describes the physiology of intestinal digestion, and, in concluding says that for the most perfect working of the alimentary canal, the system must daily produce a laxative mixture composed of bile, glycerin and soap, and when it fails to do so the common symptoms of constipation appear. This is a point to be kept in mind in the management of every case of intestinal indigestion, if the best results are to be secured.

9. **Internal Hemorrhoids.**—Monroe claims that the hypodermic injection method, although it has received its share of condemnation, is a good one, that will cure in certain cases and when properly used is perfectly safe. He discredits the deaths reported by Andrews and says that he has found him to be mistaken in some instances. For small hemorrhoids, especially in the perineal form, found so often in females, he believes there is no better treatment; and it can also be used successfully in all tumors that are above the sphincter muscle. He uses 1 dram of a saturated solution of Calvert's carbolic acid, and 3 drams of olive-oil mixed by placing the bottle in warm water, injecting from 5 to 10 drops into each tumor. He admits that there may be accidents, such as abscess or fistula but thinks that talk of heart-clot is nonsense. The preparation of the patient for this method of treatment is the same as for any other; and a weaker solution than the one given should not be used. If the sloughing is extensive or abscess or other troubles follow, they should be treated as though coming from any other cause.

10. **Galvanocautery in the Nose.**—Douglass has studied, microscopically, the effect of the galvanocautery in the nose, in order to determine the reason why this method has fallen

into disfavor, and he finds that the action of the cautery tends to form a cone of burned tissue, deepening toward the deeper structures. If it is used superficially over wide areas there results an extensive destruction of the epithelium, including the hyaline membrane. If the cautery point is rapidly pushed deeper into the tissue, the superficial effects with wide devastation of the epithelium and hyaline membrane are not noticed, and the area of reaction is more circumscribed; hence the cautery should not be used superficially or over a large surface, but should be rapidly introduced into the deeper structures and immediately drawn forward or backward. Another practical point is that the cautery point, on being placed against the epithelial surface should either not be heated or else heated only to a moderate degree—just sufficient to allow the cautery point to pass the epithelium and hyaline membrane. After this, greater heat can be turned on and the deeper structures, vessels, glands and hypertrophic masses destroyed to the bone. The old and time-honored "linear" method of cauterizing must be forsaken, since the hyaline membrane and epithelium are injured by a less degree of heat than the deeper structures. We have by the use of the superficial method, the broad based wedge or sloughing that defeats the real purpose, which is to reduce the hypertrophic parts and leave as little disturbance as possible on the surface. This method must, therefore, be discarded, except where it is desired to produce a superficial effect. In all other cases, we must use the cautery point so as to spare these superficial tissues as much as possible. He suggests a stiff wire electrode to penetrate the external tissues at a moderate heat and to be repeatedly inserted at different points along the hypertrophy. The method would vary a little according to the locality. On the septum a single puncture should be made, and that only in a case where there is dilatation of the venous sinuses of the tuberculum septi, the only condition which he thinks would require cauterization. Necrosis of the cartilagio septi is very apt to result from its disturbance. On the anterior end of the inferior turbinate and posterior ends of both inferior and middle turbinates several punctures should be made in as nearly a circular series as possible. The posterior tip of either turbinate should be punctured from the posterior pharynx, a palate retractor being used. The part of the ethmoid known as the middle turbinate should perhaps seldom be cauterized, except at its posterior end, and sometimes at the anterior end, on account of its close relation to the ethmoidal cells, and theirs to the dura mater. Pachymeningitis or ethmoiditis is the danger to be avoided.

12. **Stricture of the Ureter.**—Cumston describes the methods of performing internal and external urethrotomy. He does not believe in the routine use of the permanent catheter in the latter operation, for he thinks that it is injurious. The only proper treatments in the case of stricture are dilatation with sounds, internal urethotomy, and, in exceptional cases, external urethrotomy. Temporary dilatation is useful in the stage of exudation or early part of the connective tissue stage, but forcible dilatation is not advised. It is also used as a preparatory treatment for internal urethrotomy, which should be employed in those cases that have a valve-like or bridge-shaped form, and where the connective tissue encircles the canal. This should be done to a limited extent only, and only after being treated unsuccessfully by dilatation. Internal urethrotomy is simply an operation intended to pave the way for future treatment by dilatation. The incision made in this way, heals rapidly, but in cases of external urethrotomy, healing takes place with interposition of cicatricial tissue between the edges of the walls of the urethra; and consequently there is an actual increase in the caliber, which can be made permanent by the subsequent passage of bougies, even if this cicatricial tissue should contract somewhat. If external urethrotomy is performed, and the central end of the urethra can not be found and there is complete retention of the urine; or if in case of traumatic stricture, the cicatricial tissue extends as far back as the neck of the bladder, there is but one method, and that is posterior catheterization. The technique of the operation is described, and caution given in regard to the antisepsis; he recommends the use of urotropin to render the genito-urinary apparatus antiseptic, and special care to be taken with instruments and applications.

13. **Lumbar Puncture.**—In locating the point of lumbar puncture, three things should be considered: 1. That there is ready entrance of the needle into the subarachnoid space. 2. That the tapping is made at the point least likely to admit of damage to the nervous structures. 3. That the fluid obtained is as rich in sediment as possible. In regard to the first requirement, it is sufficiently well met by entrance through any of the lumbar spaces or through the lumbosacral space; and injury to the cord can be avoided by entering at some point below the third lumbar vertebra. The last requirement is best fulfilled by tapping in the lumbosacral space, and when the patient is a child, he would have the puncture made while in a sitting position. The essential point is to secure the greatest possible degree of ventral flexion of the spine. General anesthesia is usually unnecessary and asepsis should be as complete as possible. In very fat or muscular patients where the bony prominences are indefinite, the most satisfactory means of locating the vertebræ is by taking a line between the highest points of the iliac crest, that regularly crosses the fourth vertebral spine, and the method of puncture is described. In children the fluid is reached at a depth of 2 to 3 cm., and in adults from 4 to 7 cm. There are rarely any accidents: sometimes the fluid does not flow when one is sure the needle is in the canal, but this may be due to its being plugged while being introduced, or to the contents being of a gelatinous character. as in a case reported by Packard. A little blood stain from injury of a small vein is unimportant. More serious accidents, when they have occurred, have generally been caused by the rapid withdrawal of a large quantity of fluid.

14. **Hay-Fever.**—Douglass recommends the use of suprarenal gland extracts, both locally and internally, for a long period of time, in the treatment of hay-fever. He thinks that it is generally best given internally in the tablet form—5 gr. of saccharated, dried suprarenal gland administered at first every two hours, day and night, until some giddiness or palpitation is observed, or until the local examination of the nasal membrane shows that the remedy is controlling the vasomotor paralysis. After this has been done it may be given at longer intervals—probably every three hours, then every six, then twice daily, continuing in this way through the hay-fever season. If the symptoms reappear, the quantity may be again increased until they are again controlled. When used locally, it should be applied either by means of a spray or on pledgets of cotton saturated with a 6 to 12 per cent. solution. There is no other remedy used which is as useful as suprarenal gland, for it fulfills all the indications better than any other that has been introduced.

17. **Bottini's Operation.**—Meyer reports 12 cases in addition to those previously given, and says that 30 Bottini operations have been performed on 24 individuals, and that he finds that they show 38 per cent. cured so far, 29 per cent. much improved, 8 per cent. benefited; and a mortality of 8 per cent. directly due to operation, and 8 per cent. indirectly due to it. These cases were not selected but were operated on as they came along. One of the deaths was due to anterior incision, a method which he has since abandoned, and he thinks that in the future he can reduce the mortality.

18. **Diabetes Mellitus.**—The diet for diabetic cases is best ascertained by putting the patient on a standard one, taking besides the indefinite albuminous and fat-producing matter, a definite amount of carbohydrates—say 60 grains; then collecting a twenty-four-hours' urine, beginning after the first breakfast. The amount of sugar can be ascertained by polarization and titration, or by polarization before and after fermentation, to find out also the amount of substances which turn the plane to the left. In all mild cases and in non-diabetic glyco-uria, we have no sugar, and in these after a period of four or five days, the daily allowance of carbohydrates is increased and the urine of the last day of such a period collected as heretofore; and this is continued until the presence of sugar is found in the urine, and we know the tolerance of the system for carbohydrates. In all cases where the glycosuria is found, the

amount of carbohydrates in the patient's diet is reduced and it is kept as free from them as possible, until the condition has disappeared, when they are increased again, and so on. Where it is impossible to suppress the glycosuria even by the strictest diet, a certain amount of carbohydrates is allowed, because it would be impossible to keep the patient from taking some, as they are essential to life. It is also of great value to know in each case the fluctuation of glycosuria within twenty-four hours, so that the distribution of the carbohydrate food can be thus controlled. To make a good diabetic list, one must know the percentage of carbohydrates in the various articles and how to substitute them. Kraus thinks that a moderate amount of carefully selected alcoholics can be used, but care should be taken to avoid any toxic effect. Balneotherapy is rather favored, since it has its advantages in taking the patient away from home to a place where proper care can be exercised, some of the alkaline-muriatic waters have also a good effect. In other cases, especially neurasthenics, it would be better to send the patient to the seaside or to some high, bracing altitude, where he can find sufficient accommodation to follow the diet prescribed.

19. **Functional and Organic Heart Murmurs in Infancy.**—The denial by Hochsinger and Soltmann, of the existence of functional murmurs in the first three years of life, is noticed by Jacobi, who reports a case in an infant 13 months old. He has taken care to avoid confusing it with extracardial murmurs, an error which has been committed. This is undoubtedly rare in infants under 2 years of age, but as the lungs grow and there are present tumors or adhesions between the pleura and pericardium, the murmur may appear soft or grating, and is generally heard anteriorly only. It is rhythmic, not synchronous with contraction of the heart; strong on deep inspiration; disappears when there is no breathing and is less audible in a recumbent than in an erect position. While murmurs in most cases mean organic disease, the converse is not true, and he reports a case illustrating this. Most murmurs mean organic lesions, either in the valves or in the myocardium, but in children there are conditions which occasionally make the diagnosis somewhat difficult. In persistence of the ductus arteriosus, there is a loud systolic murmur over the sternal end of the second left intercostal space, extending upward into the vessels of the neck, mainly on the left side and audible posteriorly in the left interscapular space. There is a characteristic dulness, nearly oblong, along the left margin of the sternum to the clavicle. The diagnosis is embarrassed by complications with valvular anomalies, but when not so complicated patency of the duct is compatible with a fairly long life. In congenital stenosis of the pulmonary arteries, there is a systolic murmur in the sternal part of the second left intercostal space, which is not transmitted into the carotid, unless there is a defect of the ventricular septum. There is sometimes a full feeble second pulmonary sound, with club fingers, and hypertrophy of the right ventricle, but when atresia of the artery exists these are absent, and the right heart is small or rudimentary. Jacobi has never found an absence of the ventricle unless it was complicated with stenosis of the pulmonary artery. He can not verify the statement of books that pulmonary stenosis with defect of the septum is characterized by hypertrophy of the heart; for the opposite condition is characteristic. Another class of cyanotic cases is due to arrest of development of the common arterial trunk, which did not separate into the aorta and pulmonary artery; and in these he found little or no hypertrophy. The loud murmur is heard over the sternum, a little to the right and left, at about the second or third ribs, and is very audible posteriorly. There are some very loud murmurs, that are audible at a distance; these are more common in adults, and always systolic, generally attributed to hypertrophy and believed to be muscular. In a few cases, he thinks there is no increase and the phenomenon is due to torn and swinging papillary muscles. Not unfrequently the general condition is better than the noise would appear to suggest. Organic murmurs are not always audible, they may decrease with the increase of the pulse and may disappear from compensation or recovery; but the disappearance does not prove the murmur functional. Myocardial changes are mainly caused by anything that gives rise to hypertrophy and dilatation. The senile heart is very apt to exhibit hypertrophy and dilatation connected with atheromatous degeneration of the coronary and minute nutrient arteries causing muscular disturbance. What we call debility of the heart is due to a great many different conditions—intoxication, nephritis, etc. It is not functional, but is the result of organic lesions. In infants and children, myocarditis is mostly parenchymatous, and the most intense and persistent myocardial changes occur after la grippe and diphtheria. The alteration is never uniform, and that is why arrhythmia is so frequent; but no matter how many causes, either in the heart or nerves or distant organs, its most frequent origin is myocarditis. Special forms of arrhythmia are duplication of the heart sounds, which is a suspicious symptom, as it proves the exhaustibility of the heart muscle. Jacobi thinks it is apt to be caused by trouble in the myocardium, or lack of muscular myocardial coaptation.

22.—See abstract in The Journal of May 12, p. 1193.

23. Ibid.

24.—Ibid.

25. **Tropical Ration.**—Munson discusses the standards of diet and says that from the individual conditions that occur, we are obliged to use general averages, and he gives various tables showing the dietaries for different climates and their physiologic constituents.

26. **Use and Abuse of Phosphorus.**—Mettler restates the facts, as to the physiologic action of phosphorus in the system, and mentions its therapeutic uses. He considers it a reconstructive stimulant to all tissues and a special stimulant and nutritive to those of the nervous system. When required for the latter purpose the most satisfactory preparation which he has found is the phosphorus itself, prepared in elixir, or pill. For general tonic effects, he prefers the hypophosphites, especially the glycerinophosphates; while for gastric and hepatic troubles, acid salts are to be employed. Phosphate of soda is almost specific in its action on the liver, and in that class of mild neuroses dependent on hepatic insufficiency, he uses this first. He has found a small dose of phosphorus useful in certain forms of insomnia, due to an overtaxed and ill-nourished brain. In neuralgia, he has not found it very efficacious, but in functional impotence it is advantageous, as also in the early stages of locomotor ataxia. It is important, however, not to administer too large doses or continue it for too prolonged periods of time.

27.—See abstract in our Therapeutics Department this week.

29.—This article has previously appeared elsewhere: See title 88, p. 738, and title 82, p. 991.

35.—This article also appears in another journal: See title 151, this week.

44. **Esophageal Diverticulum.**—Two cases of this condition are reported by Richardson, both of which were successfully operated on, making a total of 16 patients thus treated, out of 56 that have been reported. The operation has been successful, and the only alternative to it, where this is impossible, is gastrostomy. In favorable cases after the removal of the pouch, the esophagus should be immediately sutured and the external wound, if closed, should be reopened on the first indication of infection. As a rule it is better to employ temporary wick drainage. Girard's method of invaginating the diverticulum, so that its internal surface projects into the esophagus, is mentioned, and he says that he has been successful with it in his practice, he, however, does not believe that it is advisable since it must produce more or less obstruction, and one that would seem more dangerous than the opening of the tube. The pathology and etiology are described, and while these pouches are called pressure diverticula, a constriction of the esophagus has not been observed in the cases reported, and so far as known, no recurrence has taken place after the excision.

45. **Post-Diphtheritic Stenosis of the Larynx.**—According to Rogers, the most common cause of post-diphtheritic stenosis, necessitating long-continued intubation, is a hypertrophy of the subglottic tissues, accompanied by a chronic in-

flammation. Intubation is not the cause, as it occurs without the operation, and less often there is an ulceration and subsequently a formation of cicatricial tissue and contraction. This can not be credited to the intubation as a rule, but it may follow tracheotomy. The frequency of the post-diphtheritic stenosis is, according to Dillon Brown, about 1 in 75 or 100 cases. Others have met it less frequently, and a reasonable estimate of the average in hospital experience would seem to be about 1 per cent.

46. **Surgery of the Stomach.**—Delatour reports several cases of gastrotomy and gastroenterostomy, and one of gastrectomy in which a patient lived twenty-one months and gave birth to a living child.

47. **Ligation of the Subclavian Artery.**—Halsted reports a successful ligation of the first portion of the subclavian artery for aneurysm of the third portion. The operation was complicated by the anomalous position of the subclavian vein, lying along the artery throughout its whole course, and the right subclavian seemed to start directly from the arch of the aorta. He attempted to perform the operation without resection of the clavicle, but believes that doing so would be generally advisable, as in his case he had to make a resection before he finished. This is, he thinks, the second case on record where the patient survived the operation; and so far there has been no appearance of the radial pulse since operation was performed.

52.—See abstract in The Journal of May 13, 1899, p. 1053.

53.—Ibid., April 28, p. 1070.

54. **Eye Defects.**—Huizinga calls attention to the need of watchfulness and treatment for conditions of visual defect that are very often neglected; and warns especially against consulting opticians instead of ophthalmologists for the remedy of these conditions.

55. **Albuminuria.**—The conditions in which albumin is present in the urine are pointed out by Kennedy: nephritis in its different forms, the functional albuminuria which occurs in the lithemic and hemoglobinuric forms and the neurotic type. He mentions last the extrarenal albuminuria, accompanying disturbances in the urinary organs, and cystitis, that may also be due to oxaluria.

56. **Malaria.**—The technique of examination for malariai parasites is described by Woldert, and the products which may lead to error in the diagnosis are mentioned. They are: the refractive bodies seen in the red corpuscles, the karyokinetic figures of the leucocytes, and the vacuoles and products of blood disintegration.

57. **The Electrocautery in Nose and Throat Diseases.**—Dabney has found the electrocautery useful in broad hypertrophies over the turbinated bones, with erection of the turbinated tissue, and in cases where there is loss of tone of the vasoconstrictors of the blood-vessels of that region. He rarely uses it on the septum, as only two conditions ever call for it; one a marked thickening of the so-called tubercle of the septum, where two or three linear cauteries have been useful; and the other frequent hemorrhages from erosion of the lower anterior part, not attributable to other disturbances of the circulation. He thinks, however, that it is less valuable in this condition than is claimed. In the throat, the conditions most helped by the electrocautery are the deep-seated follicular tonsil inflammation, the so-called "granular sore throat," mycosis of the fauces, and enlargement of the veins at the base of the tongue, and the so-called "lingual tonsil."

58. **Pancreatic Digestion.**—Rachford's paper is a study in comparative anatomy, showing the peculiarities of the bile and pancreatic openings into the small intestine in carnivorous and herbivorous animals, respectively. He thinks that the physiologic inference is that fats and proteids require a retarding in their passage through the duodenum, in order that they may be acted on by the bile and the pancreatic juice before they reach the alkaline succus entericus of the jejunum and ileum. This physiologic inference from anatomic facts is supported by laboratory experiments that have been previously published.

61.—This paper appeared elsewhere: see abstract in The Journal of April 21, ¶ 81, p. 991.

66. **Hyperkeratosis Lingualis.**—This condition, according to Goodale, consists histologically in a papillary enlargement and a small round-celled infiltration of the corium, together with protoplasmic reticulation, nuclear degeneration, and excessive keratin formation in the epithelium; the latter on its superior surface being prolonged upward to form filamentous processes, containing peculiar refractile pigmented granules, with which a characteristic bacterium stands in intimate association. It is of interest to note that the hypertrophy affects all layers of the mucous membrane and reaches its greatest development in the posterior and central portion of the dorsum. The condition appears to be primarily of the nature of a chronic inflammation with secondary alterations in the epithelial cells.

67. **Cysts of the External Auditory Canal.**—Somers describes a case where one of these cysts was removed. They originate: as retention cysts of the existing glands; or by the independent formation in the tissues, through softening and liquefactive changes, the material so produced compressing the cells in the immediate vicinity, and these undergoing changes, ultimately forming the cyst wall. Or they may be produced by collection of fluid between connective-tissue cells, these areas forming into one large cavity and the surrounding tissues combining into a retaining wall. Still another way is by the formation of the fibrous tissue wall around a foreign body. They are almost always located at the junction of the cartilaginous with the osseous canal, where the glands abound.

68. **Suprarenal Extract.**—Bates concludes, from six years' experience with suprarenal extract, that it is a powerful and unobjectionable astringent, but that it does not mix with other substances and must be prepared fresh whenever needed. In nose and throat disease other remedies should also be employed. He thinks that its being a natural secretion of the body prevents its causing physiologic disturbance, and that we have no other substance that can take its place.

75. **The Chemistry of Cow's Milk.**—This paper gives a careful comparison of human and cow's milk and the author's method of preparing infant food from the latter. He siphons from the bottom of a bottle of fresh milk, three-fourths of its contents into an ordinary double boiler, and adds 1½ teaspoonfuls of essence of pepsin, then warms slowly to blood heat and keeps it there until thoroughly curdled; then heats with constant stirring, until the temperature of 155 F. is reached, strains while hot, and dissolves in the whey a heaping teaspoonful of sugar of milk and the white of one egg. When this is cold he pours the sweetened whey back into the milk bottle and mixes it thoroughly with cream and top milk, and then pasteurizes the mixture. If this is found too laxative the quantity of milk sugar should be reduced. He has found this method a good one in most cases, and for the home modification of cow's milk for infants it is freely recommended.

76. **Hemorrhoids.**—Campbell operates for hemorrhoids by gradually dilating the anus and irrigating by the bichlorid solution. He then pulls the hemorrhoid out with forceps, severs the lower attachment with blunt-pointed scissors, and dissects it up from its submucous attachment until it is attached by a small pedicle containing the vessels. This is ligated with fine catgut and the hemorrhoid cut away. The operation is completed by suturing the incised edges with catgut and inserting a piece of iodoform gauze for drainage, with a sterilized gauze pad applied and retained by a T-bandage. The third day the bowels are opened by a suitable aperient, and this is continued as long as necessary. The patient sits up on the tenth day and is about on the fourteenth. He has found this uniformly satisfactory in twenty-five cases where he has used it. It does not produce the contused wounds and charred surface which are results of the ligature and cautery operations, and leaves a clean sutured cut and the rectal surface as complete and perfect as ever.

77.—See abstract in our Therapeutics Department this week.

80. **Hot Bath in Abdominal Diagnosis.**—The methods of inspection in abdominal examination are more or less interfered with by the rigidity of the abdominal wall, or sometimes

simply by its thickness. In such cases the patient is often anesthetized for the purpose of completely relaxing the tissues. Dock calls attention to a method that is not only safer, but truly superior to anesthesia for this purpose, which is simply immersing the patient in a hot bath. Its advantages are less risk, less disagreeableness, and complete control of the patient's respiration, thus calling into play the powerful action of the diaphragm. The only difficulty is that it requires a bath-tub and a large quantity of hot water; and that in cold weather the patient needs a gradual cooling before going out of doors. The bath-tub should be long enough for the patient to lie almost flat, or at least with his knees drawn up. The temperature should be gradually raised from 100 to 110 F., or even a little higher.

81. **Intraligamentous Growths.**—Hawkins describes these growths and reports eleven cases.

85. **The Longitudinal Wire Suture.**—The advantages of this method of suturing the opening in the radical operation for hernia are given by Harris, as follows: it can be easily and certainly sterilized, is of non-hygroscopic character, maintains an accurate coaptation of the edges without constricting the tissue within its grasp, and is easily removed after its functions have ceased. The wire is threaded to a curved, round, non-cutting needle and introduced along the edges of the structure. The first enters the skin about 1 to 2 cm. from the inner angle of the incision and passes directly down to the inner edge of Poupart's ligament. The needle takes a grasp of this structure not to exceed 1 cm. in length in a longitudinal direction, but so as to cross some of its fibers. It then enters the conjoined tendon and the inner edge of Poupart's ligament, thus going from side to side until the entire length is traversed. It then penetrates the external oblique and skin and comes to the surface 1 to 2 cm. from the outer angle of the incision. This is not an over-and-over stitch, for when the wire is pulled tight it is perfectly straight. Each grasp of the needle should be about 1 cm. in length and no kinks should occur in the wire. When there is considerable space external to the cord, caused by early divergence of the muscles from the ligament, it is advisable to take one or more grasps of the suture external to the cord. A sufficient opening should be left to permit the passage of the cord without obstruction. The first wire having been introduced, the cord, which has been held to one side, is now restored to its normal position. The second wire taking the edges of the divided external oblique passes from without inward, closing the wound over the cord, leaving but an opening for it to pass into the scrotum. The cutaneous edges are now closed by a third wire, and the operation is finished. The ends of the wire, which are left long, are folded over pads of gauze, and a strip of adhesive plaster crosses over each end of these, fixing them to the body so that they can not slip and draw out. Sterilized gauze dressing is then applied. This operation is applicable to a large proportion of cases of inguinal hernia, and the size is immaterial so long as we have firm tendon and structures.

95. **Chorea.**—Punton notes our lack of knowledge in the pathology of chorea and discredits the general belief of its necessary connection with rheumatism or endocarditis. Heart disease is more often found as a sequel than a cause, and he thinks that the disease is more important than it is generally considered, and believes that rest and arsenic are practically the best and most reliable remedies, used together with a general tonic treatment and attention to details.

97. **Pulmonary Complications of Typhoid Fever.**—Edson discusses the possibility of pulmonary disorders occurring with typhoid, and illustrates them by cases. He says that pneumonia is most frequent and may be a pure typhoid infection, and gives the points of diagnosis between such and the complicating pneumococcic disorders. The initial chill in typhoid is not so marked, there is less pain, dyspnea and cough, and if the sputum is not rusty the suspicion of typhoid is increased. Early diarrhea and enlarging of the spleen are in favor of typhoid, but only the trained judgment can make a perfect diagnosis before the rose spots appear or the Widal reaction is present. Other pulmonary disorders that may complicate typhoid are pleurisy, abscess, tuberculosis and catarrhal pneumonia, which is usually an avoidable complication.

98. **Climate and Treatment.**—Denison argues for the importance of climate in the treatment of tuberculosis, and thinks that it should stand first in the remedies to be used. Next to this he values outdoor life and exercise, then good feeding, medical supervision, inhalations, local medication, surgical interference, and special medication based on antitoxin treatment. However, in lasting results there is no single agency equal to suitable change of climate.

99. **Acute Coryza.**—The prevention of catarrhal disorders, according to Black, is best done by recognizing the fact that the skin is the natural covering of the body; and that we should not keep air away from it. He does not mean that we should go nude, but that the clothing should be such as will admit of a free passage of air to the skin. Underwear should be worn for only sanitary reasons and not for warmth. Wool should not be worn next the skin, but only for outer garments, while the material used for underwear should be linen, very loosely woven. The other clothing should be little heavier in winter than in summer, and when out of doors the overcoat should be in proportion to the severity of the weather. He claims he has put these theories into practice for five years with good results.

107. **The Therapeutic Use of Yeast.**—In 1899, T. Landau reported cases of leucorrhea treated with local applications of yeast, and Mitchell has followed up the method and gives an account of eight cases thus treated. The summary does not show the brilliant results obtained by Landau, but justifies continuing the trial of this method. Of the eight cases, only one was entirely unaffected and that was of syphilis and the discharge not of local origin. No unpleasant after-effects were noticed.

119. **Post-Febrile Insanities.**—Bauduy finds, from an analysis of the symptoms and literature, that in the etiology of post-febrile insanity we have heredity causing unstable nervous equilibrium; disorders of the nerve centers themselves, of which fever is often only a symptom; anemia, the result of febrile processes or excessive and prolonged temperature elevation causing irritable weakness; toxic pertubation of the nervous nutrition by the retaining of waste matter causing blood changes, and, lastly, microbic invasions of the nerve centers producing a cachectic condition of these organisms.

120. **The Fetal Theory of Eclampsia.**—Von der Hoeven supports the theory that the blood poisoning in fetal eclampsia is largely due to the toxins from the fetus. This would explain the fact of its greater frequency in the case of twins, and the other peculiarities of eclampsia in primiparæ. The intoxication of the child is often overlooked because of the special attention given to the mother, and the coma of the infant is mistaken for quiet sleep.

121.—This paper appeared elsewhere: see abstract in THE JOURNAL of April 7, ¶ 1, p. 863; also of April 14, title 125, p. 925.

123. **Nervous Prostration.**—Ranney reiterates his well-known views in regard to eye-strain as a cause of headache and other nervous symptoms, especially those that go under the name of nervous prostration.

124. **The Missile and the Weapon.**—This article is a medicolegal study of bullets and firearms. The author shows the peculiarities of bullets as affected by the arms through which they are sent, and also the facts that can be learned from inspection of the weapon itself.

130. **Hemoglobin Estimate.**—Tallquist describes a method which is mentioned in the eighth volume of "Nothnagel's Handbuch," and that consists in placing a drop of blood on a piece of filter-paper and letting it spread there, judging of the amount of hemoglobin from the strength of the color. He has made a scale which is illustrated here in this article. It consists of ten different colors with regular interspaces to about 10 degrees, each according to the hemometer; the strongest color corresponds to the normal blood, the lightest to that caused by pernicious anemia. The blood is obtained in the usual way, by pricking a clean finger, and the drop must

amount to enough to make the stain on the filter-paper show a 5 or 6 mm. diameter; it must spread equally and slowly and the examination must be made by direct light so that the comparison can be immediately after the stain has lost its humid gloss. It is necessary to make the examination by daylight, and the paper must be perfectly white and smooth, corresponding in thickness to about fifty-five leaves to 1 c.c. Tallquist notices the fact that in specimens of pernicious anemia of a high degree the color spot on the paper will appear surrounded by an uncolored or slightly colored ring. This occurs only when the number of blood-corpuscles has gone down to about half what is normal.

132. **Pernicious Anemia.**—Ball discusses the general subject of pernicious anemia, and mentions especially the ignorance of all authorities in regard to its etiology. In its beginning it is hard to recognize, for the blood condition is not marked until the anemia is considerably advanced. The prognosis should be extremely cautious; the morbid anatomy is not characteristic. The best treatment seems to be the use of increasing doses of arsenic, rest in bed, systematic feeding, massage for the muscles, and a daily flushing of the colon.

133. **Anesthesia.**—The conclusions deduced by Magaw from experience with over eleven hundred cases of anesthesia and from a study of the subject generally are: 1. Ether kills slowly, giving plenty of warning, while with chloroform there is not given time to say goodbye. 2. If ether is given with plenty of air and the drop method, there are few, if any, bad results. 3. Firmness with a hysterical patient assures the anesthetizer more success in gaining confidence of the patient. 4. An anesthetic is dangerous as long as it is in use. 5. The mortality can be diminished by the careful selection of the anesthetic. 6. The surgeon should make the choice. 7. In most cases where artificial respiration is resorted to, it is usually the fault of the anesthetizer or the method used.

148. **Facial Neuralgia.**—Belt recommends the placing of the hand, on the opposite side to that on which the neuralgia occurs, in a basin of hot water as hot as can be borne; and reports several cases of relief with this method.

151.—This article also appears in another journal: see title 35, this week.

## FOREIGN.

### British Medical Journal, May 5.

**Secondary Suture of the Brachial Plexus.** William Thorburn.—The case reported is one of injury to the brachial plexus, situated in an accessible region of the neck external to the scalenus medius, the motor fibers above that level intact, those below it paralyzed and sensory fibers all paralyzed. The plexus was torn across and hopelessly contused in that region, but its roots were not torn away from the spinal cord. The operation was done by opening the posterior triangle of the neck, the clavicle pulled to one side, the main roots of the plexus dissected out of the cicatrix and the peripheral ends, to some extent artificially, separated into five cords which were attached to the higher ends without tension. Four years after the operation there is partial return of motor power, with occasional sensation of heat and cold and at rare intervals pain; sensation exists in the arm, but the localization of touch is defective. The wasting of the muscles still continues to a certain extent, but improvement is even now progressing. The author thinks that it is probably the only case as yet recorded of secondary suturing of the brachial plexus.

**The So-called "Stave of Thumb," or Bennett's Fracture.** George Thos. Beatson.—The author calls attention to the fact that fifteen years ago, E. H. Bennett proved that fracture of the metacarpal bone of the thumb is more common than that of any other of these bones, and that it is not as usually believed, "just above the middle," but is situated at the base of the bone. The fact has not received the recognition that it should and is hardly mentioned in modern text-books. It somewhat simulates a dislocation, and the pain and swelling that accompany it so mask crepitus that the injury is generally regarded as "sprain of the thumb," and the dislocation is serious. He reports a case in which the X-ray revealed the condition as described by Bennett, which was completely relieved by extending and thoroughly abducting the thumb and then applying a plastic splint to it. The point he calls attention to is that sprain of the thumb should be subjected to Röntgen rays, as otherwise Bennett's fracture is likely to be overlooked.

### The Lancet, May 5.

**Then and Now; or the Influence of Modern Surgery on Medical Practice.** Fred J. Smith.—After prefacing his remarks with some statements in regard to the possibility of zeal outrunning discretion in modern methods, which he illustrates by some of the prophylactic fads of the day, the author speaks of the progress which has been made in regard to cancer, and sums up by saying that we have gained but little in clinical diagnostic precision, much in scientific knowledge, and most of all in our power to smooth the path to the grave, by means of hypodermic medication and operative relief. In gastric ulcer he believes in operative interference if the hemorrhage reappears after a trial of medicines and remedies, and would urge it on the third repetition or confirmed persistence of hemorrhage. When the diagnosis is uncertain he would insist on rest in bed with "slop" diet, and if on resumption of active life the symptoms recur, he would suggest operation, and on the third recurrence, most strongly urge it. With gall-stones, he thinks an operation is required if there is a large stone, too large to escape by the natural routes, if there is an accumulation of smaller ones causing trouble and if any suppuration has occurred around a stone of any size. The question is to diagnose these conditions. The recurrent attacks of local pain, associated with jaundice or not, almost certainly associated with a gall-bladder large enough at least to be felt, are the strongest evidences of stone too large to pass and of the accumulations of the smaller ones. The symptoms of suppuration in this region are somewhat misleading and the presence or absence of leucocytosis would be of aid. In ascites he believes the proper method is to have the abdomen opened by the surgeon, when purges, diaphoretics, and diuretics have had a fair chance, or when there is no time to use them, owing to the urgency of the case. He thinks this better than tapping and more scientific, and it is far safer for the patient. He has never seen death arise from simple exploratory laparotomy, but peritonitis has occurred from paracentesis. It assists and clears up a doubtful diagnosis, allows removal of removable cause at one sitting and patients who are usually considered incurable have recovered after laparotomy. He thinks these five facts constitute an unanswerable case in favor of laparotomy against canular drainage, at least once in the course of every case. As regards appendicitis, he holds that we must operate instantly in fulminating cases, as soon as we are reasonably certain of pus in less acute ones, and after subsidence of the attack in milder ones. In the treatment of renal troubles, tuberculosis, if not generalized, should be very carefully diagnosed before interfering. We must ascertain by every means in our power which kidney is affected and if the other is sound. He would still advise a month's course of creosote treatment, which in his experience is the only drug method that has any influence on the tuberculous internal lesions. As regards stone in the kidney, when it is once definitely diagnosed, it is our duty to operate as speedily as possible before consecutive changes occur. Bacteriologic examination of the urine, administration of a few small doses of turpentin, and X-ray photographs are the means he mentions for the diagnosis. He does not think much of dietetic and water treatment, and believes a simple exploratory operation is justified in all cases.

**Effect of Alcohol on Human Brain.** Victor Horsley.—The author reviews the facts in regard to the influence of alcohol on the brain. The researches on the reaction period by Kraepelin are referred to, and they show that it is a depressant, although there may be a temporary increase of activity. The influence of the drug may be due to loss of cerebellar controlling influence as well as dissolution of the cortical cerebral constituents. The direct effect on the nerve cells themselves is noticed, and while the action is a chemical one, he shows from the researches of Nissl and others that its effect on them is direct. From a scientific standpoint, he believes that it can not be true that the small doses of alcohol such as people take at meals have practically no deleterious effect. From a scientific standpoint total abstinence must be the course, if we are to follow the plain teachings of truth and common sense. It is the part of the scientist to point this out and the part of the politician to adopt it as a whole.

**Vasectomy Relative to Enlarged Prostate and Bladder Atony.** Reginald Harrison.—The writer sums up his conclusions in regard to vasectomy as follows: 1. Vasectomy has been shown to be especially effectual in the earlier stages of prostatic hypertrophy in effecting shrinkage of the gland and the restoration of the natural process of micturition. 2. In cases where there is evidence to show that the prostate has in the course of degeneration assumed the form and structure of a fibrous growth the conditions are such, provided the symptoms of obstruction warrant the adoption of other measures than catheterism, as to render some form of prostatectomy preferable to either vasectomy or castration. 3. Where, as a consequence of sudden or protracted prostatic obstruction, secondary changes have taken place in the bladder itself, in the form of sacs, pouches, or trabeculation, the possibility of restoring its natural function by any means is extremely unlikely. Under such circumstances the induction of shrinkage of the enlarged gland will do good in affording a readier access for the catheter and in removing spasm, pain or hemorrhage connected with this or other similar processes. In a further communication he hopes to illustrate the practice of vasectomy under various conditions.

### Bulletin de l'Academie de Medecine (Paris), April 17 and 24.

**Diagnosis of Rabies in Dogs.** Nocard.—The lesions described by Van Gehuchten as specific of rabies in dogs (see The Journal, page 811) have been thoroughly investigated by others and Nocard reports that they were found constantly in dogs dying from rabies. But in animals killed at an early stage of the disease, the lesions were so slight as to be unreliable for the diagnosis. Consequently, when a person has been bitten by a dog in which these lesions are found, the diagnosis of rabies is imperative, but the absence of these lesions, when the animal was killed at once, does not convey any certainty that the animal was not rabid.

**Vaccin from Goats.** Hervieux.—The vaccin derived from cow-pox in the goat posesses approximately all the properties of vaccin from heifers, and Hervieux consequently recommends the goat for this purpose in countries where it is difficult to procure cattle. Tested on 250 soldiers in Kabyle the goat vaccin was successful in 78 per cent.; ordinary cow vaccin in 85 per cent.

**Profound and Lasting Analgesia of the Eye with Dionin.** A. Darier.—In Darier's experience with iritis, keratitis, arthritic ulcers, iridocyclitis and episcleritis, accompanied with much pain, the application of ethylmorphin hydrochlorate or dionin, relieved and banished the pain in a few moments. A rapid improvement of the lesions was also noted in most cases. He found it very effective in a case of glaucoma, relieving the pain and improving vision from 1/16 to 1/4 in thirty minutes. He instills a 5 per cent. solution, two or three drops every few minutes until chemosis occurs. It smarts at first and then all pain is relieved. The result was negative in only one case in his experience, and in this no chemosis occurred; the patient was evidently refractory. The action of the dionin is strictly local.

### Bulletin de la Soc. Med. des Hop. de Paris, April 5.

**General Arsenical Melanodermia.** Enriquez.—A few instances are on record of a general pigmentation resembling Addison's disease, but less diffuse, appearing in spots and patches while respecting the extremities and face, which followed the prolonged use of Fowler's solution. In an observation described in the *Bulletin* last June, and in another more recent issue, the pigmentation still persists, although less intense, notwithstanding suspension of the arsenic. In the latest case the melanodermia was accompanied by dryness of the throat and slight conjunctivitis, and the hands and feet assumed a lichenoid appearance.

**Further Facts to be Learned with the Methylene Blue Test.** F. Widal.—The author describes the modifications in the renal permeability of a patient, "more cardiac than Brightic," under the influence of medicinal and hygienic measures. The permeability of the kidneys for potassium iodid, at first subnormal, was restored to normal with milk diet, rest and theobromin. Methylene blue was not eliminated at all at first, but permeability improved until the blue appeared in the urine in an hour. C. Achard and A. Clerc have been studying absorption and the influence of medicines, by means of the blue test on normal subjects and others with interstitial or lead nephritis, who took each morning, fasting, a pill of 5 cg. of methylene blue, for several days. The curves show that the normal subjects eliminated the largest proportion at first, followed by a period during which all eliminated alike, and then elimination ceased in the normal but continued for a while in the rest. The period of elimination varied from forty-seven or fifty hours in the normal to eighty or 186 in the nephritic subjects. The uneliminated blue evidently accumulated in the blood in the latter, at first, until the blood became so concentrated that the same amount of blue passed through the kidney—without any change in its permeability—as passed in normal conditions without the previous accumulation in the blood. This mechanism suggests the need of caution in estimating the condition of renal permeability from elimination of the normal principles of the urine. They may become accumulated in the blood in case of deficient permeability, and then be eliminated in approximately normal amount, even with complete suppression of the functions of one kidney.

### Presse Medicale (Paris), April 25 and 28.

**Pulmonary Gangrene After Gastroenterostomy.** J. L. Peyrot.—Pulmonary or pleural accidents in the course of cancer of the stomach have been noted, and attention has been called to their exceptional frequency after gastroenterostomy. An observation is described in which pulmonary accidents followed a successful gastroenterostomy for commencing cancer of the pylorus accompanying an old gastric ulcer. Bronchopneumonic foci in the right lower lobe first appeared, then adjacent serofibrinous pleurisy, then putrid evolution of the bronchopneumonic foci and perforation of one into the pleural cavity, with sudden, fatal pneumothorax. The writer ascribes this train of accidents to septic emboli from the gastric ulcer, the microbes probably mobilized more or less by the operation. The gangrenous foci had many points of resemblance with pulmonary infarcts: site, shape, etc., and also recalled the gangrenous pulmonary foci of embolic origin noted in the course of otitis of the middle ear in children. Whether microbian infection proceeds by way of the veins or lymphatics the lung is soon reached, and its capillary system arrests the infection and serves as a filter to prevent general septicemia. The accidents in these cases are similar to the pulmonary granulia observed sometimes after curetting a peripheral tuberculous focus, but in the former instance, the mobilized microbes are anaerobic saprophytes, microbes of putrid fermentations, such as flourish in old gastric lesions and alimentary stasis. The process described is evidently one of the most important reasons for the high mortality after surgical intervention on the stomach. It also suggests the advisability of thorough lavage of the stomach before operating and the benefits of an exclusive milk diet for a few days beforehand; also the necessity of waiting several days before returning to alimentation through the mouth. Although the peritoneal serosa may be amply cicatrized in forty-eight hours, the gastric mucosa is open to microbian infection.

**Technique of Radiography of Fractures.** G. Contremoulins.—Conditions should be identical and determined beforehand, for radiographic interpretation to be exact and capable of comparison. This result can be obtained by having a perpendicular line from the Crookes' tube always coincide with the center of the plate and pass through the center of the fracture. By this means the misleading effect of the oblique rays will be abolished and the position of the bones accurately shown. Two radiographs at 90 degrees, one anteroposterior, the other lateral, will thus give accurate information in regard to the fracture, and can be repeated indefinitely with identical results. If impossible to get the member in the perpendicular line, the tube and plate can be slanted, but always retaining the same relative position.

**Functions of the Kidney in Chronic Nephritis.** LABBE.—Recent research has demonstrated that there is no constant relation between uremia and renal impermeability; impermeable kidneys without uremia have been noted and also uremia with permeable kidneys. Likwise it has been shown that there is *no connection between uremia and the toxicity of the blood serum.* The cause of uremia, therefore, can not be sought exclusively in toxic retention from renal impermeability. The toxicity of renal extract and the vasoconstrictive properties of renin have been established, and increased diuresis and excretion of urea have been observed to follow the administration of nephrin. Albarran and L. Bernard have noted that double *nephrectomy is twice as rapidly fatal* as double ligature of the ureters. These facts indicate that the kidney has two functions: an external, the elimination of urine, and an internal, of which little is yet known. The phenomena due to disturbances of the first function, renal impermeability, are toxic accidents, cephalea, Cheyne-Stokes, disturbances in digestion, redness and dryness of the mouth, vomiting, diarrhea, hiccough, and mechanical cardiovascular accidents characterized at first by arterial hypertension, succeeded by arterial hypotension *with asystolic edema. The syndrome dependent on the* insufficiency of the internal function of the kidney is characterized by edema and albuminuria, impossible to connect with renal impermeability. The theory of hydremia or loss of the osmotic balance does not explain the production of edema. The combination of these two syndromes constitutes "renal insufficiency." "Uremia" is produced when to this are added *infections and functional insufficiency of other organs:* liver, heart, lungs. The syndrome of impermeability is seen in the interstitial nephritis of Bright's disease. Parenchymatous nephritis at first presents only the syndrome of insufficiency of the internal function, on which the other syndrome is superposed later. The permeability of the kidney is therefore not the only factor to be taken into account in determining the prognosis of chronic nephritis, the clinical manifestations must supplement it. Another point learned from late research is that toxic medicines can be employed in certain cases of nephritis with permeable kidneys.

**Progres Medical (Paris), April 28.**

**Babinsky's and Schaefer's Signs.** H. VERGER.—The value of these signs in the diagnosis of cerebral affections was thoroughly tested at the Bordeaux clinic, with the result that they are found less important than claimed by their authors. Babinsky's sign—extension instead of the usual flexion of the toes on excitation of the sole of the foot in case of hemiplegia—was found quite constant in cases of disturbed function of the pyramidal tract, but it requires extremely delicate maneuvers to produce it satisfactorily and it is too variable from one subject to another and even on the same patient to constitute a symptom of much importance for the diagnosis. Schaefer's sign—extension of the toes instead of flexion, when the Achilles tendon is pinched very hard in case of hemiplegia —was found to have no semeiologic value as an indication of a cerebral lesion.

**Semaine Medicale (Paris), April 11, 23 and 28.**

**Infectious Icterus.** A. CHAUFFARD.—The pathologic physiology of a typical case of infectious icterus in a young butcher was made the subject of careful study, and the apparently simple disease with recovery in a month, disclosed complex processes that would have escaped casual observation. First there was incitation and functional hyperactivity of the hepatic cell, then exaltation of its ureogenic power, followed by diuresis induced by the elimination of enormous quantities of urea (146 gms. of urea in 5 liters of urine during the first twenty-four hours after entering the hospital, tenth day of disease), leading to secondary dehydration and hyperdensity of the blood. Knowledge of these conditions imposed treatment to restore to the blood the normal proportion of water it had lost. A liter of artificial serum was injected subcutaneously each day for three days, then per rectum for four days, then one-half the quantity for a day or so, by which time the patient had become hydremic and the artificial serum was suspended. Chauffard asserts that the exact moment of commencing convalescence in acute diseases can be determined by the weight. As soon as the weight ceases to diminish or remain stationary, and commences to increase, convalescence is established.

**Vertebral Manifestations of Typhoid Fever.**—The four recorded cases of typhoid spondylitis commenced abruptly during convalescence or a few weeks after recovery from typhoid fever, with intense pain and sensitiveness in the lumbar region of the spine, accompanied with fever, great weakness in the lower limbs, and lancinating pains. Knee-jerk was abolished and in one case continence of urine and feces. There was tumefaction in the painful region in two. All recovered. The serum test proved useful in differentiating. If the pains are bearable, rest in bed and sodium salicylate may be effectual, but intense pain requires a plaster cast which relieves at once and arrests the progress of the osteomyelitic process.

**Centralblatt f. Chirurgie (Leipsic), April 14.**

**Head Covering for Aseptic Operations.** K. SCHUCHARDT.—A light, springing metal band, 2 cm. wide, fits over the head from the eyebrows to the base of the hair. It has a small plate at each end and a projecting button at the crown of the head. The lower part of the face, including the end of the nose, is then covered with a strip of gauze, 110 by 45 cm. square, the upper corners drawn smooth and buttoned to the button on the metal band. A triangular piece of gauze is then put on the head, one straight edge 150 cm. in length, across the forehead above the eyes, and the two side points tied together behind over the third point. The head, beard and face, except the eyes, are thus completely covered. The gauze never slips out of place, and scarcely interferes with the breathing. The simplicity and security of the contrivance and the ease with which it is put on, impel Schuchardt to recommend it in high terms, insisting that asepsis is not possible when hair and beard are exposed. Surgeons, attendants and nurses in his service all wear this head covering, which is also useful in caring for the sick and in disinfecting rooms.

**Deutsche Medicinische Wochenschrift (Leipsic), May 3.**

**Improvement in Serumtherapy.** A. WASSERMANN.—Ehrlich has shown that the bactericidal effect of bactericidal immune sera is due to the presence of two distinct substances, one serving to kill the bacteria, and the other serving merely to fasten the former to the bacteria. Each is powerless without the other in proportionate amount. He calls the substance which fastens the bactericidal substance to the bacteria, the "between" or "immune body," while he applies the name of 'end body" or "complement" to the directly bactericidal substance, which is probably some kind of a digesting ferment. Buchner gave the name of "alexin" to the bactericidal substance in normal serum to which he has called attention. The "between body" is not found in the normal organism in proportionate quantity. It does not appear in large amounts until evolved during the process of immunization or spontaneous recovery from the infection in question, and this is what constitutes an "immune serum." This analysis shows that two factors are required to cure an infection by means of a bactericidal immune serum: 1, a sufficient amount of the "between body," i. e., of the immune serum, and 2—which is equally important—a sufficient amount of the end body, i. e., of the substance which is fastened by the "between body" to the bactericidal cell and then destroys it. If the amount of either of these substances is less than required, the infection proceeds unmolested. Wassermann states that in all previous serumtherapy only one of these factors, the "between body"—the immune serum—has been taken into account. This was supplied to the infected organism in abundance, but the need for the second, the complementary factor, was overlooked. The only benefit derived was from the co-operation of the abundant "between body" with the small amount of the corresponding bactericidal end body which it found already present in the organism. When this was used up, the "between body" had no further sphere for its usefulness. Wassermann therefore considers it rational that both "between body" and end body should be supplied in serumtherapy, and he accomplishes this by injecting normal serum simultaneously with the immune serum. His experimental results have brilliantly confirmed the correctness of his premises. He compares the mechanism of the process to interlocking wheels. The "between body" is the intermediary between the end body wheel and the bacteria wheel. Each is useless without the rest, and all are useless unless the interlocking wheels have exactly the requisite number and style of teeth. Or, to use Fischer's simile of a lock and key, certain "between bodies" fit into certain end bodies and into certain bacteria, and not into others. Future research must determine which end bodies are best adapted to co-operate with certain "between bodies" and the kind of infection in which they are most active. It by no means follows that typhus immune serum, from an immunized horse, will co-operate with the end bodies in normal serum from a goat, for instance. The correct complements for given immune sera must be sought which will not only fit the "between body" and the bacteria, but will also escape being bound or destroyed in the infected organism. In his experimental research he found normal serum from beef cattle answered his purpose, and announces the important fact that guinea-pigs injected with three loops of living typhus culture and then injected in a half hour with .5 c.c. of typhus immune serum mixed with 4 c.c. of fresh. normal beef serum, all survived in good health, while control tests with normal serum or immune serum alone all terminated in the death of the animal in twenty-four hours. "The addition of fresh end bodies—the bacteria-destroying substance—derived from normal cattle, immeasurably increases the infection-arresting power of our immune sera, and thus enhances the possibility of curing with them an existing infection in man."

**Red Bone-Marrow and Myeloblasts.** O. Naegeli.—The bone-marrow cells without granules are not lymphocytes but specific elements of the bone-marrow, according to the conclusions of Naegeli's research. He suggests the name of myeloblasts for them, as they are undoubtedly the preliminary stages of the myelocytes and possibly also of other marrow elements. They are characterized by the absence of granules and nucleoli, and the reticulated nucleus, which is more strongly basophile than the protoplasm. They vary from the size of a lymphocyte to that of a myelocyte. The smaller have round nuclei, richer in chromatin; the larger, oval nuclei, with more protoplasm. The myeloblasts are the phylogenetic and ontogenetic ancient primitive form of marrow cells. They remain even in the adult, as the preliminary stage of myelocytes. They are involved in the pathology of the bone-marrow, as they appear predominantly in case of pernicious anemia—retrogression of the blood-formation into embryonal conditions, megaloblastic and myeloblastic marrow—of typhus—paralysis of the function of the bone-marrow—and of myelogenic leukemia. They increase to a slight extent in many other diseases, especially in secondary anemia—carcinoma, tuberculosis. The myeloblasts may pass into the blood, and are found numerous in it in cases of myelogenic leukemia.

**Report of German Malaria Expedition.** R. Koch.—In concluding this third report Koch states that his tests of prophylactic doses of quinin have shown that an interval of seven days after two "quinin days" is sufficient to prevent relapses. His method of treating malaria is, therefore, to give the patient, when free from fever, usually in the early morning hours, one gram of quinin, repeated every day until the malarial parasites have disappeared from the blood. Then follows a pause of seven days, then two more quinin days, then the seven-day pause and two quinin days, and so on for two months at least. The results have been most excellent. In a few cases gastric disturbances prevented absorption and subcutaneous injections of the quinin were resorted to. The hospital at Stephansort has been almost cleared of patients, but time alone will show whether this is due to his prophylactic measures or is merely a transient lull. There have been very few new cases, although the weather and work is most favorable for malarial infection, and anopheles abound. He observes that the experience of persons coming from a non-malarial region to live in a malarial is similar to that of the children born in the latter. They all become infected, but after three or four years acquire a sufficient degree of immunity. The Europeans at Stephansort must have all come from non-malarial regions, as none escaped infection, the first attack of fever appearing in three or four weeks after their arrival on the coast. He adds: "the only exceptions to this rule are the two members of the malaria expedition who have remained free from infection to date, undoubtedly owing to their systematic prophylactic use of quinin." He outlines the history of the colony in regard to malaria, as follows: it must have existed among the natives for a long time, possibly brought originally from the Malay archipelago or the Moluccas by traders. The first Europeans who visited the country, and especially the first immigrants, must have paid a heavy tribute to this infection. But gradually the prospects beame better as the emigrants became more and more immune. Then the physicians began to report that in consequence of this or that sanitary measure, or increasing agriculture, etc., "malaria is diminishing." But suddenly it breaks out again; not as the reports announce, in consequence of certain meteorologic conditions, but every time when a large number of new and freshly susceptible workmen are imported. They have to acquire, in the same way as the children of the country, their gradually won immunity which enables them to live permanently in a malarial region. The sacrifices may be great in some instances; 125 died out of 273 Chinese brought from Hongkong in 1898, the majority from malaria, and many of the survivors are still under the influence of the infection. Similar catastrophes are liable to occur whenever susceptible persons are brought to the colonies unprotected by prophylactic measures. He concludes by stating that if his assumption is correct, that malaria is restricted to man, then it will prove possible, by exterminating the parasite in man to cut the life thread of malaria, as it were, and accomplish its gradual disappearance. Working toward this end he instituted treatment as above described for every one in whom the malarial parasites were discovered.

### Wiener Klinische Wochenschrift, April 10.

**Cause of Initiation of Birth Act.** J. Thenen.—After reviewing and rejecting all other theories advanced to date, Thenen explains the mechanism of the birth act and the phenomena of pregnancy in general as the specific reaction of the female organism to the stimulus of the living fecundated ovum. This reaction consists, in the uterus, of changes in size, etc., and also in a specific functional behavior, which holds the natural tendency to contraction in check. The placenta reaches its maximum of growth by the thirtieth to thirty-fourth week, and then ceases to grow. The blood with which it is supplied passes first through the fetus, which appropriates its most nourishing elements, and the placenta fails to receive sufficient nourishment and hence degenerates after the thirty-fourth week. As the retrogressive phenomena in the placenta become more and more marked, the close, vital connection between fetus and maternal organism hitherto existing is interfered with. The placenta degenerates more and more, finally the specific stimulus transmitted through it by the ovum ceases to be felt by the uterus, which then returns to its normal physiologic behavior and expels what has become a foreign body, no longer a vital part of itself. Febrile affections, mechanical irritation, etc., induce contractions of the uterus which may hasten the retrogression of the placenta and actual labor pains occur as the vital connection between fetus and uterus becomes severed.

**Influence of Alcohol on Reducing Power of Urine.** A. Gregor.—The reducing power of the urine is increased by alcoholic drinks, especially beer, due exclusively to the alcohol contained in them. This increasing reducing power should be credited chiefly to grape-sugar, although all the reducing substances, creatin, etc. are also evidently increased.

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## Original Articles.

# INTRALARYNGEAL INSUFFLATION.

## FOR THE RELIEF OF ACUTE SURGICAL PNEUMOTHORAX. ITS HISTORY AND METHODS WITH A DESCRIPTION OF THE LATEST DEVICES FOR THIS PURPOSE.

BY RUDOLPH MATAS, M.D.
NEW ORLEANS, LA.

In man, as in the lower animals, the sudden admission of air in the normal pleura, whether this occurs accidentally or as the result of deliberate purpose in the course of operative interventions in the thorax, is a condition always fraught with much danger to the patient and anxiety to the operator.

It is not a small, accidental puncture or aperture communicating with the pleural cavity, permitting the gradual entrance of air and the production of a partial pneumothorax, that is feared, but it is the large openings which allow the rapid and free entrance of air, and that are followed almost invariably by collapse of the lungs, cyanosis and evidences of defective oxygenation and arrested respiration, that have led the surgeons of all times to dread the production of traumatism or surgical pneumothorax as one of the greatest evils in intrathoracic surgery.

The evidence on this subject is so complete that it is almost superfluous to discuss it. Nothing can be added to the experimental evidence which, beginning with the classic researches of Glück, Block, Marcus, Schmidt and Biondi in the early '80s, ended with Murphy's work in 1897, or to the clinical observations which, commencing with Richerand's historic case of resection of a thoraco-parietal tumor in 1818, have accumulated in such numbers that a mere list of the contributions referring to this grave accident would make up a large-sized volume.

It was the fear of pulmonary collapse that led Dieffenbach, with all his temerity and daring, to command that in operating on thoraco-parietal neoplasms the surgeon "should halt at the pleura," and Stromeyer, Albert, Heinecke, and Bardeleben were scarcely less emphatic. Roser recommended long meditation before undertaking the removal of any tumor of the chest that might involve the pleural serosa. Billroth himself, in 1887, for the same reason declared that he was not in favor of the extirpation of tumors involving the thoracic parietes. Subsequent events have shown that while great progress has been acomplished by a better appreciation and control of septic conditions and the improvements in the technique of anesthesia and hemostasis, and better results have been obtained for this reason alone, the dangers from pneumothorax have remained until quite recently an unchanged factor in the mortality.

Whatever the essential causes of the asphyxia caused by acute traumatic pneumothorax, they are always associated with the sudden, free, large opening of the normal pleura, and with the interference of the pulmonary respiration induced by the collapse of the lung; while the phenomena vary in intensity according to individual conditions, and in some few cases are so slight that they can be disregarded, it is the duty of every surgeon, whenever he is about to undertake an operation on the chest or neighboring regions which might involve the pleura, to assume that pneumothorax is inevitable, and that he must be prepared to prevent or meet its evil consequences.

It is the risk of acute pneumothorax that has led surgeons like Krause and Tuffier to advise the detachment of the pleura to facilitate the extrapleural exploration of the lung, just as detachment of the peritoneum to facilitate the *extraperitoneal* exploration of the abdominal cavity was advised at a time when the risk of peritonitis was more seriously feared than now. Notwithstanding Tuffier's brilliant and unique success with this method, which in 1894 permitted him not only to explore but to extirpate a tuberculous apex, the procedure is, as a rule, impracticable, and has not been repeated. The fear of shock and the interference with respiratory functions will prevent the general adoption of Bazy's method of direct intrapleural exploration which that surgeon was the first to practice with success in 1895.

Bazy makes an incision in the intercostal space just long enough to admit the index finger into the pleura, being careful to plug the wound with the finger while exploring. H. Delagenière, with less regard for the dangers of pneumothorax, would open the pleura freely for exploratory purposes, trusting to his ability to quickly seize the retreating lung and suture it to the wound to prevent complete atelectasis. Poirier, Lejars, Ricard, Monod and others have adopted Bazy's procedure, but with varied results. The advantages of free and direct *intrapleural* exploration of the lungs to determine the existence or non-existence of adhesions, to localize lesions of the lungs and other intrathoracic organs, and to determine their operability, are too obvious to be insisted upon; but such a procedure, no matter how carefully or aseptically conducted, is fraught with risk, and will never appear to the general surgeon in the same light that he now regards exploratory laparotomy. *Until the danger of seriously interfering with the respiratory functions, by inducing acute collapse of the lungs, is clearly eliminated or is reduced to a safe minimum, the analogy between the pleura and the peritoneum from the surgical point of view will never exist.*

The methods that have been tried to counteract the disastrous effects of acute pneumothorax in the course of operations in the chest are, [illegible] ew excep[illegible] more the results of instinct ar[illegible] al exp[illegible] than of a clear understanding [illegible] siolo[illegible] largely in her practice. But other writers, such as Meunier and Noel, of Strassburg, Lobstein and Flamant, rejected it because of the alleged difficulties encountered in its introduction.

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*Read at the meeting of the Southern Surgical and Gynecological Association, held at New Orleans, November, 1899.

Depaul's persistency, however, overcame all objections made against insufflation, and new impetus was given the subject by those who busied themselves in modifying or improving his simple but effective canula. Among the numerous inventions that followed after Depaul's memoir of 1845, the *"aerophore pulmonaire,"* which Dr. Gairal presented to the Academy in November, 1879, deserves special mention in this connection. It consisted in a long intubating canula provided with a short laryngeal curve which he had attached to a compressible rubber bag, very much like the modern Politzer bag. The canula entered the glottis, and air was supplied by this rubber bulb. It differed practically from the Chaussier tube only in the addition of the rubber bulb, which took the place of the operator's lungs. (Fig. 2.)

In 1877, Pros, of la Rochelle, added a new but impracticable laryngeal insufflator, which was provided with a tongue-depressor and an epiglottic elevator combined. This was probably never used by anyone except its originator.

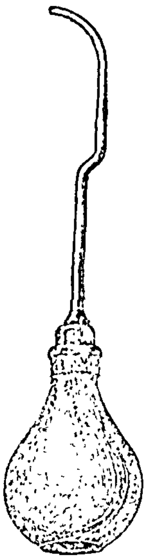

Fig. 2.

Gairal's aerophore for intraglottic intubation, with detachable rubber bulb for direct insufflation of air in asphyxia neonatorum. (From Depaul's article in the "Dictionnaire Encyclopédique," vol. xiii., 13th series.)

In 1877, Ribemont described a new tube which differed from the old Chaussier canula in its curve. This curve was based upon an anatomic study of the parts, and had attached to it an air-pump. Its intralaryngeal end resembles and closely suggests the present form of O'Dwyer's intubating canulas. Like Gairal, he adapted a detachable bulb to the handle of the intralaryngeal tube. The compression of the bulb was graduated by certain marks according to the quantity that it was desired to insufflate with each compression of the hand. (Fig. 3.) Other modifications in the insufflating apparatus were introduced by manufacturers. One of these consisted in a double or compound bellows which simultaneously aspirated the vitiated air and injected fresh, pure air, just as Doyen has done recently with his modern and ingenious apparatus.

Depaul objects to all the modifications of his tube and to all insufflating appliances as unnecessary complications. He says that at least in new-born infants the elastic recoil of the chest and lungs is amply sufficient to expel all the vitiated air during the full expiration that *follows a forced inspiration.* A little experience and practice in inflating the lungs by the direct expiratory efforts of the operator will furnish an infinitely safer and more satisfactory insufflator than any mechanical inflator, since the operator is better able to appreciate the resistance of the lungs to the intrabronchial pressure. In this way the degree of inflation is thoroughly adjusted to the chest capacity. While this is no doubt true, it is nevertheless possible to obtain equally excellent results with a small bulb or bellows of 100 to 200 c.c. capacity, and in view of the greater convenience of this method to the operator, it must be regarded as an advantageous modification. In this connection I am much pleased to direct attention to the fact that one of our Fellows, Dr. J. D. Bloom, the able surgeon in charge of the Charity Hospital of this city, has recently adapted the intralaryngeal canula of the O'Dwyer apparatus to the needs of pulmonary insufflation in asphyxia neonatorum. (Fig. 4.)

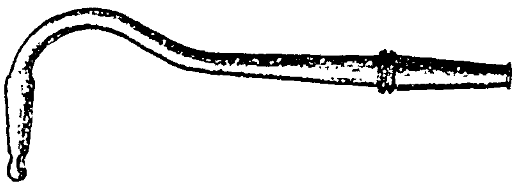

Fig. 3.

Ribemo[illegible] a for direct insufflation of air in asphyxia [illegible] Depaul's article in the "Dictionnaire Encyclopé[illegible] series.)

His apparatus is furnished with a rubber bulb or bag, which reminds one of the Gairal and Ribbemont instruments. The conical and graduated forms of the O'Dwyer tips make them fit easily into the glottis and render the instrument one of the most useful yet devised. The facility with which the O'Dwyer canula is applied, especially in the new-born infant, will, I trust, tend to popularize and revive the practice of intralaryngeal insufflation in this frequent and fatal condition, since it is by far the most direct and effective method of expanding the lungs and inducing artificial respiration. It is far superior, I am convinced, to Laborde's rhythmic traction of the tongue, Schultze's, Sylvester's, Hall's, Daniel's, and other indirect methods that are at present in vogue in obstetric practice.

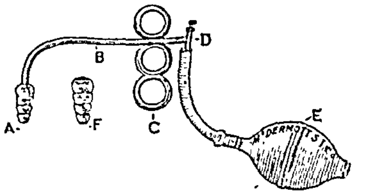

*Fig. 4.*

Dr. J. D. Bloom's adaptation of the O'Dwyer intubating canula for intraglottic insufflation in the treatment of asphyxia neonatorum. The rings (C) are used as a handle to steady the intraglottic canula, and are constructed exactly as in the original O'Dwyer tube. The bulb (E) is a Davidson syringe rubber bulb with a valve at its free end to permit the entrance of air.

In a rather hasty review of the literature of artificial respiration and the various mechanical appliances that have been invented for this purpose in the course of the present century—a literature which is adequately represented by the large collection in the surgeon-general's library at Washington—I have been struck by the close similarity, in principle at least, of two American inventions suggested and described independently and at a long interval of each other. The first is the apparatus described by Dr. Truehead, of Galveston, Texas, in 1869. (Ein Apparat Zur Kunstlichen Respiration bei

Asphixia, Mitth. a.d. Sitz-Protok. der Gesselschaft f. Geburtsch. in Berlin, 1869-72, i., 154-156, 2 pl.) This rather complicated appliance was originally intended to insufflate air into the lungs by means of an intubating canula which was inserted into the glottis and larynx. There are at least two sizes of the intralaryngeal pieces, graded to suit the ages of the patients—chiefly newborn infants. The laryngeal piece is pyriform in shape, and is made to conform to the size and outline of the glottic orifice. It fits closely to the larynx, and its conical shape facilitates its tampon action. The mouthpiece is shaped like a curved catheter, and this is connected to a bellows which works on a vertical axis and automatically injects and aspirates air in and out of the trachea in a rhythmical fashion. As a true intubating canula and respiratory machine supplied by a bellows, it clearly anticipates—though it is a far more complicated way—the second American invention, with which we are familiarly acquainted as the Fell-O'Dwyer apparatus. Truehead's description is fully detailed and well illustrated in "Transactions of the Berlin Obstetrical Society" for 1869-72. I have not been able to find any reference to Dr. Truehead's original work in English, and my only source of information is from the paper in the German proceedings. It is certainly worthy of a distinct place in the history of American inventions for the relief of asphyxia neonatorum, and is entitled to precedence over the Fell-O'Dwyer apparatus, as it anticipates in principle almost all the essential characteristics of this latter but more simple appliance. It is curious that, notwithstanding its American origin, we should have been so thoroughly ignorant of its existence in this country, and that we should be compelled to acknowledge our indebtedness for all the information available to German sources.

### INTUBATION OF THE LARYNX.

Another source of inspiration which has led to the present form of intralaryngeal insufflation by intubation as a substitute for the tracheotomy canula for surgical purposes is found in the efforts made at various times in medical history to intubate the larynx for the relief of asphyxia when caused by acute or chronic laryngeal obstruction. The suggestion which culminated in O'Dwyer's epoch-making observations, first published in January, 1880, can be traced back, as we are told by Dillon Brown, to Hippocrates, who said that "canulas should be carried into the throat along the jaws, so that air may be drawn into the lungs." Intubation was practiced by Desault in 1801, by Finaz in 1813, and subsequently by Lallemand, Benoit, Depaul, Loiseau and Gros, in France; by Weinlechner, Trendelenburg and Von Huttenbremer, in Germany; by Patton, Liston, Sanctuary and Macewen in England; by Horace Green in this country, and by a host of others too numerous to mention. But the experiments of all these workers, with the solitary exception of Bouchut's brief experiments and failures with short tubes, in 1858, were made with catheters or long tubes of similar make. It is to O'Dwyer, therefore, that the greatest credit is due for establishing intubation in its present form, and it is due to his unswerving and indefatigable perseverance, patience and mechanical ingenuity that the present form of apparatus has attained its marvelous efficiency.

O'Dwyer's resurrection of Bouchet's crude ideas on intubation, and his magical transformation of the bloody and tragic picture of tracheotomy in diphtheria into a simple, painless and bloodless bit of technical jugglery, has practically closed for all time one of the most animated chapters in the history of surgery. By similarly transforming the tracheotomy canula of the insufflating apparatus that Dr. Fell, of Buffalo, has devised for the sustained practice of artificial respiration in opium narcosis he has opened a new chapter of still greater interest and promise than that which his previous achievements had brought to a close.

While thus, according to Fell and O'Dwyer all the credit that is due them as independent investigators, and for perfecting and simplifying an apparatus which has proved itself thoroughly efficient and reliable in maintaining artificial respiration, it must be recognized that the idea of applying this method to the needs of thoracic surgery originated in other sources, and that in writing the history of the subject in its surgical relations, due credit must be given to other and independent investigators.

*(To be continued.)*

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# INTUBATION OF THE LARYNX.

CHAS. J. WHALEN, M.D., LL.B.

CHICAGO.

Intubation of the larynx, which has been employed in many thousand cases in this country and abroad, has now taken its place with tracheotomy as a well-recognized procedure in the treatment of obstructive dyspnea.

Before taking up the technique of the operation, I will briefly consider its history and the indications for the employment. The passing of a tube, as for instance a catheter, for the relief of laryngeal obstruction is of ancient origin, but it was not until 1858 that Bouchet, of Paris, devised special instruments for this purpose. Unfortunately for Bouchet, owing partly to the defective condition of the instruments, the profession of Paris, led especially by the great authority, Troussseau, not only condemned but ridiculed the new method. Criticism coming from such an authority as Trousseau caused the treatment to meet with so little favor that it was soon entirely abandoned.

While catheterism of the larynx has since at various times been attempted by McEwen and others, it was the genius of the late Dr. Joseph O'Dwyer, of New York City, that brought the instruments to a degree of perfection which left nothing to be desired, for in 1881, just twenty-three years after Bouchet's experiments, O'Dwyer, without knowledge of any previous attempt, produced instruments of a satisfactory nature and at the same time established the validity of Bouchet's statements. From that time the operation has been growing in favor, and with many operators has superseded tracheotomy as the primary operation in laryngeal stenosis, and this is especially true with the profession in Paris. On the other hand, however, in Germany and England O'Dwyer's invention has been but little used.

Before the advent of serum treatment for laryngeal diphtheria, in a series of 7070 cases collected by Lanke, Dillon Brown, McNaughton and Maddren, the mortality was 60.4 per cent., while since the use of antitoxin, in 1155 cases collected by Welch and the American Pediatric Society the mortality was 26.2 per cent., showing a reduction of 34 per cent. by the use of the serum treatment. The results of tracheotomy have likewise been greatly improved by the antitoxin treatment, and in nearly the same ratio as in intubation, a collection of 23,941 tracheotomies for croup in pre-antitoxin days, collected by Prescot and Goothwaite, gives a mortality of 71.3 per cent. Of 873 tracheotomies performed after the use of serum the mortality was 40.9 per cent. It is useless to multiply evidence, for from all parts of the world the testimony is the same, that the mortality in cases of laryngeal diphtheria requiring operation has been reduced over 50 per cent. In all the cases that are of diphtheritic origin, I advise the very early use of antitoxin, for it not only causes the membrane to loosen rapidly and prevents its reformation, but it also reduces the period of wearing the tube and, by using it at this stage of the disease, you may avoid a more serious operation of intubation. It has been verified in a report by the American Pediatric Society, that in 60 per cent. of the cases of laryngeal diphtheria intubation is not required if reliable serum has been used in the first stage of the disease. In a total of 1700 laryngeal cases there were 668 of intubation with 82 deaths, a mortality of 27 per cent.

A few years ago so enthusiastic were some of our physicians over antitoxin that they were loudly claiming that we would have no further need for intubation tubes. Physicians who act on that supposition will sooner or later meet with disappointments in cases where they have relied wholly on the antitoxin to relieve dyspnea and have delayed intubation until it is too late. Again, it should be remembered that diphtheria is not the only disease that is likely to cause stenosis of the larynx, for it may be produced by the pseudomembrane which results from the streptococci or staphylococci as well as the Klebs-Loeffler bacilli. It may also be associated with measles or scarlet fever and be produced by edema resulting from traumas, as by scalds, corrosive substances or direct injury.

No matter how these patients are treated, we are bound sooner or later to come face to face with cases that demand the operation of intubation in order to save life. Again, in some patients who have been injected with antitoxin the membrane fails to come away in from twenty-four to thirty-six hours, and where these patients show symptoms of laryngeal obstruction is would not be safe to wait for the action of the antitoxin, for delay might cause the patient his life. It is better to intubate as soon as signs of stenosis develop; here is one of the situations where an unnecessary operation will do no harm, and therefore the physician need not hesitate as he would before deciding to make a tracheotomy. The reader will at once question the possibility of these two operations being rivals. Having had more or less experience with intubations and tracheotomy in the last five years, I believe that instead of the two operations being rivals they are complimentary, one to the other, each having well-defined indications for its employment. So far as prognosis goes the mortality from intubation is very similar to the number of fatalities following tracheotomy.

Generally speaking, intubation in private practice should be accorded first place because it is less formidable and can be done by the country practitioner alone. Having none of the essentials of an operation and requiring no skilled assistance, being bloodless and requiring no anesthetic, leaving no wound to heal and no subsequent disfiguring cicatrix, parents will much more quickly consent to it than to tracheotomy. The rapidity with which it can be done when once the knack of performing it is acquired makes it essentially the operation of emergency. Since the period of diphtheritic stenosis has been so shortened by antitoxin, tracheotomy as a routine operation is hardly justifiable, at least until the lesser one of intubation has been attempted.

First among the conditions suggesting tracheotomy in preference to intubation I would mention timidity and inexperience in introducing and extracting intubation tubes; next a morbid condition which always contraindicates intubation; again, remoteness of the physician from his patient with the possiblity of stenosis following quickly after the expulsion of the tube; then the possibility of the intubation tube stopping up from membrane which can not be relieved by inexperienced attendants as can be done in tracheotomy, would suggest the latter operation, and tracheal pseudomembrane as well as spasm of the larynx always suggest the cutting operation in preference to intubation.

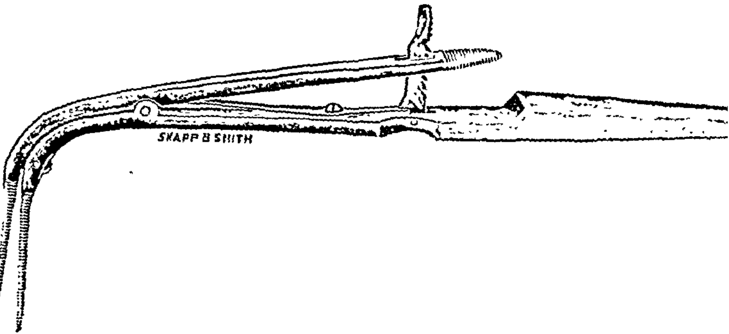
Regarding the scope of intubation in acute stenosis in adults it can usually be substituted for tracheotomy with advantage; also in acute edema of the larynx in adults, unless complicated, I would consider a few gentle attempts at intubation justifiable. In chronic stenosis the use of the intubation tube has been employed successfully in many cases, and it has proved satisfactory in chronic syphilitic stenosis of the larynx where there has been difficulty in dispensing with the tracheal tube because of granulations growing in the region of the wound, and it has been proved in these cases that the tube can be worn for a considerable time without harm or inconvenience.

As to the indications for laryngeal intubation, in a word they may be said to be the same as in tracheotomy, namely, restlessness and unremitting dyspnea; do not wait for marked cyanosis for this may be too late a symptom; the earlier the operation is performed the greater the chance for recovery; fortunately in these days the question of operation for euthanasia is rarely raised, but even that may occur. I believe that at the present time many patients with laryngeal obstruction are allowed to die without any attempt at operative interference because tracheotomy is not considered practical under the circumstances and the alternative operation is not sufficiently known. It follows as a necessary corollary that the family physician who treats diseases which directly or indirectly may cause laryngeal obstruction should educate himself to intubate without waiting for skilled assistance, for if the best results are to be obtained in intubation it must be done early and we must not wait to send to a neighboring town for a specialist skilled in this work. I have been called long distances to intubate, and in some cases the necessary loss of time resulted in the death of the patient, the family physician waiting for symptoms such as gasping inspiration or cyanosis before suggesting consultation, and at the same time lessening the patient's chances for a favorable result. It is unfortunate for patients that physicians rely so much on the specialist in these cases. This tendency to neglect the cultivation of the special branches makes the general practitioner become less and less the all-around man, less self-reliant and equal to all emergencies, and also a less valuable member to the profession. All honor to the old-time country doctor of the best type, who, under the greatest disadvantage, was able with equal skill to meet every possible emergency, and was never daunted by any difficulty or danger.

While specialism has unquestionably advanced the science and art of medicine and surgery, it has a great tendency to produce a narrower type of medical men, and this is especially true of the vast numbers of recent graduates who are rushing into specialism before they have properly mastered the relations of the different portions of the field of medicine to others, or the system at large; by devoting their constant toil and energy to one small subdivision of work, they become practically machines and useless in regard to other portions of the same industry. It is again the old problem of the survival of the fittest. With the proper use of the advantages and with an earnest and high purpose of doing the best possible, the general practitioner can and should use the results of special work in such a way as to enlarge his powers and advance his usefulness.

There is only one way to properly learn the operation of intubation, and that is by the frequent introduction of the tube on the cadaver until one's fingers are thoroughly familiar with the landmarks and the mechanism of the intubation set. In the past two years I have taught over 500 senior students intubation on the cadaver, and I have failed to find a single one who could not, after a few lessons, perform the operation on the cadaver after the technique had been fully explained.

The instruments required for this operation consist of six tubes graduated for children less than 12 years of age. There is a gauge for measuring the tubes to determine the proper size for any given age, an applicator for introducing the tube, an extractor for withdrawing it, and a mouth gag. There have been a great many attempts made toward combining the introducer and extractor into one instrument, and thus doing away with the obturator, which would materially cheapen the cost price of the entire set, the expense being the chief objection to the O'Dwyer instruments. Chief among the intubation sets on the market in which the extractor and introducer have been combined in the same instrument are what are known as the French intubation set and the rational one. After considerable experience, both on the living subject and on the cadaver, I have come to the conclusion that neither of these instruments is practical, especially for extubating, which is the difficult part of the operation, while the insertion of the tube can be done with any instrument providing the beak is not too long to prevent the direction of the end of the tube into the larynx at the proper time. With the French instrument the shortness of the beaks and their being directly at right angles to the handle, compel the operator in extubating to elevate the outer end of the instrument tightly against the incisor teeth, and when this is done the beaks can not be properly inserted into the opening of the tube, more often failing to reach the tube at all excepting in very small children. The rational intubation instruments have been receiving much advertising of late, but our experience on the cadaver, as well as a personal one on a living subject, tells me not to endorse this set, for it is far from being satisfactory. The number of introducers or extractors makes it again as complicated as the O'Dwyer st. Besides the difficulty in remembering the instrument to be used in extracting, it must be borne in mind that the lower blade has to be held by the operator directly on a line with the upper one, otherwise it can not be inserted into the tube; this adds more or less confusion to the operation, and even when this is done properly there is far more difficulty in getting the beaks into the opening of the tube than is experienced with the O'Dwyer extractor. Dr. John Edwin Rhodes has informed me that he has found this rational intubation instrument unsatisfactory as an extubator; indeed, he had even to abandon it recently and resort to the O'Dwyer, with which extubation was made without difficulty. All physicians who have done more or less intubating know that at times the manipulation of the instruments becomes quite difficult, the O'Dwyer set requiring both an extractor and an introducer, the latter being quite complicated, and a trigger-key provided to push the tube off the obturator. This is unnecessary, for the reason that inexperienced operators are liable to concentrate their minds too much on this trigger-key, relieving the obturator from the tube, thus prolonging the time the finger should be in the patient's larynx, while as a matter of fact the tube has finally to be pushed off the obturator with the left index finger. Again, the screw on the introducer is liable to become loose and does not hold the tube firmly in the right position. In the O'Dwyer set the obturator has to be screwed home firmly so as to prevent rotation at the time it is being introduced; while this is being done it not infrequently happens that the major axis of the head does not lie antero-posteriorly, owing partially to failure of adjustment by the maker, but more likely to result from the wear of the thread of the screw. These objections, together with the difficulty of getting new tubes to fit old obturators, caused me one year ago to have the introducer and extractor combined in the same instrument. In this new instrument no adjustment of the screw is necessary; the major axis of the tube is always fore and aft; instead of a screw the tubes are attached by a simple catch arrangement and are detached by the same mechanism.



WHALEN'S INTRODUCER AND EXTRACTOR.

The introducer and extractor is modeled (see illustration) very closely after the O'Dwyer extractor. The lock on the handle of the instrument prevents, in extubation, the tube from dropping back into the larynx or esophagus at the critical time when it is being turned over the base of the tongue, and the beaks, being of proper length, allow the hand of the operator to be in the easiest possible position when operating. From experience in twelve or fifteen hundred intubations on cadavers I feel it safe to recommend this instrument for general work.

The tubes have been modeled somewhat after those made by Ferraud. The top opening has been made funnel-shaped, slanting from the rim toward the center, which greatly facilitates the introduction of the beak when the tube is in the larynx. Another change which has been made is that the lower end has been cut off at an angle of about 45 degrees slanting from right to left, and this facilitates the passage of the tubes between the vocal cords. The hard-rubber metal-lined tubes are much used at the present time, and are in every respect the ideal ones, being sufficiently light to be expelled by the child in case the lumen becomes occluded, and yet requiring an extreme effort on the part of the child for expulsion by coughing.

The operation of intubation is not very difficult, providing one has had previous practice on the cadaver. The tube is selected according to the age of the patient, the length for the different years being indicated on the gauge. The age is not the only guide, for a very large child will often require a tube of larger size than its age would indicate. Two assistants are required, neither of whom need be skilled. The child is wrapped in a blanket or sheet, which is pinned closely about the neck so that the arms are pinioned, and it is placed in a sitting position on the lap of the first assistant, its head being inclined slightly backward and held by the second assistant, who is standing behind the child. The gag is fixed in position between the left molars, the mouth being opened as widely as possible. The tube is now threaded and attached to the introducer, which the operator holds in the right hand with the fourth finger through the safety thread to keep it out of the way. He now introduces his left finger into the mouth, having previously covered the finger by a cot to prevent inoculation in case the gag becomes displaced and the finger is bitten. The first landmark is the epiglottis. In very young children it is not always easy to feel this owing to the softness of the tissues; in cases where the soft parts are much distorted by the swelling a valuable landmark is the cricoid cartilage, which lies directly behind the epiglottis and the opening of the larynx. Immediately below the epiglottis is the entrance to the glottis, bounded below by the two arytenoid cartilages. It is important for the successful performance of the operation that these cartilages should be clearly recognized. To do this it may be necessary to pass the finger down to its utmost extent. Once the arytenoids are felt the opening of the glottis must lie immediately in front of the pulp of the finger. Keeping the finger then in position, slip the tube quickly into the mouth, pass it along the palmar surface of the finger down over the epiglottis until the ball of the index finger is reached. The handle of the introducer is then slightly raised so as to direct the point of tube into the glottis, and the tube passed on until the collar of the tube is felt. The mechanism for relieving the tube is then put in action with the right thumb and the introducer withdrawn, the tube being kept in position meanwhile with the left index finger. In inserting the intubation tube it is very important to work strictly in the middle line, otherwise you will be likely to get the point of the tube behind the epiglottis and into the cul-de-sac on either side.

The actual operation of intubation, if properly performed, ought not to occupy more than ten or fifteen seconds, and with practice such dexterity is obtained that the entire operation requires but a few seconds from the time the finger is introduced. If the operator fails to pass the tube in at once the finger and tube should be immediately withdrawn to give the patient time to breathe before making a second attempt. It is more surgical to make several gentle attempts than to make one bold one which is almost certain to do irreparable damage. The most reliable indication of the tube being in the larynx is that the breathing at once becomes aphonic, the child coughs and brings up more or less accumulated secretions, while if the tube is passed into the esophagus no change is observed in the respiration. The instantaneous relief of dyspnea afforded by this operation is among the most cheering spectacles which the surgeon ever sees, the patient quickly falls to sleep, the respiration diminishing and the cyanosis rapidly disappearing.

Being satisfied that the tube is really in position the gag is removed and the child put to bed; before doing this, however, I always remove the safety thread. The habit of some physicans of tying the thread over the ear and leaving it for some days is not only inconvenient for the physician but it is also annoying to the patient. The thread should always be immediately removed unless there is some evidence of loose membrane below the tube. To remove it you proceed as for introducing the tube, the index finger holding the tube in position while with the other hand gentle traction is made on the end of the thread after the ends have been severed. The tube should be allowed to remain until the diphtheritic membrane has disappeared from the throat and the expectoration has become thin and viscid. In pre-antitoxin times the average was about seven days, while under our present mode of treatment it has been reduced to from thirty-six to seventy-two hours. The after-treatment of cases of intubation should be directed to the original disease as before operation. The child should not be allowed to lie on its face, for in this position a slight cough might expel the tube. It sometimes happens that the tube is coughed out soon after its introduction, because too small a size has been used. In these cases dyspnea does not return for a few hours so that there is nearly always ample time to notify the attending physician. When called because of dyspnea after operation you should, by digital examination of the throat, satisfy yourself that the tube is really in place, for in the absence of the attendant it may have been coughed up and swallowed. A case of this kind came under my own observation about a year ago. No bad effects occur from this accident, however, for the tubes are always passed through the intestines without difficulty.

Many consider feeding during the period of tubation an objectionable feature, and have greatly exaggerated its danger. The most satisfactory position in which to feed a tubated patient is probably at an angle of 45 degrees, or in a reclining position which allows the liquid nourishment to gravitate over the epiglottis. Nursing infants may continue at the breast after operation, and ordinarily they have but little difficulty in swallowing, while older children often experience considerable difficulty in taking fluids. Another method of feeding consists in placing the patient supine, with the head much lower than the body, and feeding from a nursing bottle or through a tube. In this position fluids can not run into the trachea, but will be forced up the esophagus into the stomach. Feeding is always easier after the first day or two, and patients who wear the tube for chronic disease soon experience no trouble whatever, showing that the difficulty depends more on the inability to co-ordinate the muscles of deglutition when the tube is in place than on mechanical causes. One more hint in the after-treatment in cases of intubation or tracheotomy resulting from diphtheria is, never lose sight of the fact that many of these little patients are in a state of profound systemic poisoning, with the heart muscle very much weakened, and that part of the secret of later success lies in recumbency with appropriate nourishment and heart tonics, for which alcohol and strychnin are specially indicated.

The accidents and complications which may occur during intubation consist chiefly in pushing off the false membrane in front of the tube as it enters the larynx; this I have never known to occur, and we have it on so good an authority as Dr. O'Dwyer himself that he never encountered this accident in his extensive experience with intubation. If on the introduction of the tube there is no reaction to its presence, no violent fit of coughing, we may conclude that the trachea is lined with pseudomembrane and that the chances of the patient will be greatly improved by removing the tube and performing tracheotomy at once. It is therefore always desirable when intubating to have the instruments in readiness for performing tracheotomy should it become necessary.

Blocking of the intubation tube rarely occurs, perhaps because of the tube being straight instead of bent as with tracheotomy tubes. In cases where the tube has become blocked with mucus it has invariably been coughed up with the obstruction. Bronchopneumonia does occasionally occur after intubation, but not nearly so frequently as in tracheotomy. Hemorrhages may result, but are usually of little consequence, coming as they do from the membrane of the fauces; this accident will always be avoided by the skilled operator.

If the tube selected should be too small, the probable result will be its non-retention, as it may be at once coughed up. If this happens it will be necessary to replace it by a larger one. There is very little danger of the tube dropping into the trachea, because its collar is of sufficient size to prevent such an accident.

Extubation is always a critical period in the treatment of a case by the O'Dwyer method. This procedure is usually more difficult than the introduction of the tube. The child is placed in the same position as for its introduction, and with the index finger of the left hand the operator guides the extractor down to the larynx, where it is felt to strike against the end of the tube. It is then moved about gently, no force being used, until it drops into the opening of the tube. The blade should then be separated and firmly held while the instrument and tube are withdrawn, special care being observed not to relax the pressure just as the tube is being turned out of the larynx, for if this is done the instrument will slip and the tube may either fall back into the larynx or be swallowed. This accident can not happen with the new instrument that I have devised, because once the handles are locked they can not be separated unless done purposely by the operator. Special care should be taken that no pressure is made on the head of the tube in attempting to introduce the extractor, for the tube might possibly be pushed below the vocal cords, an accident that has happened in a few cases. There is, however, a very simple and sometimes quite an effective method of removing the tube, which requires the use of no instruments and which was discovered in Paris by one of the house surgeons at the Hospital des Enfants Malades. This is the method of expression. It is performed thus: The nurse takes the child on her knee, the operator faces the child and with the left hand over the vertex places the right thumb on the trachea, grasping the neck with the fingers. He then simultaneously compresses the trachea backward and upward, and jerks the child's head downward into the nurse's lap, and in the majority of cases the tube drops out without further trouble. This method of expressing the tube I believe to be an unscientific, dangerous and uncalled-for process, and it should only be resorted to in emergency where any procedure to save life would be justifiable.

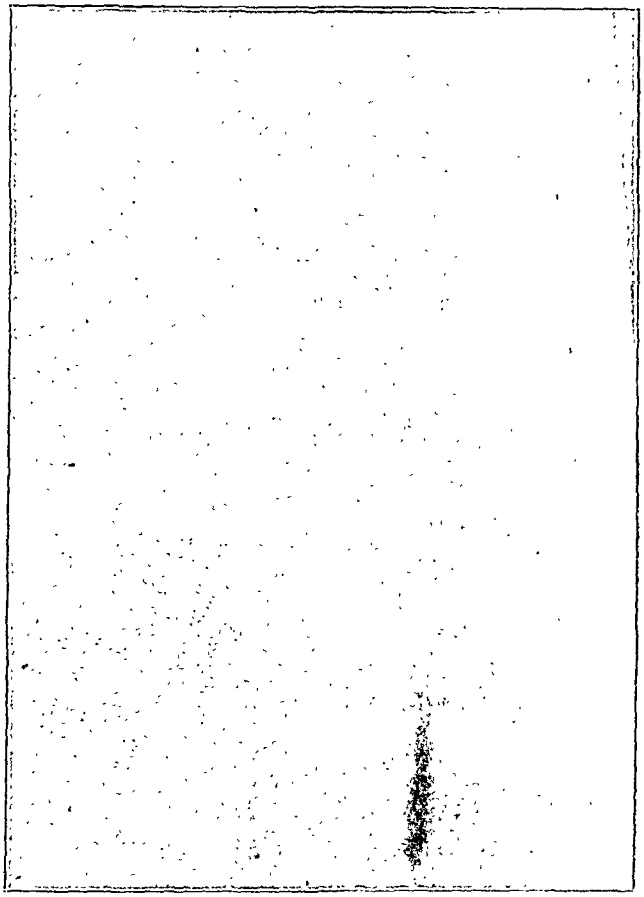
34 Washington Street.

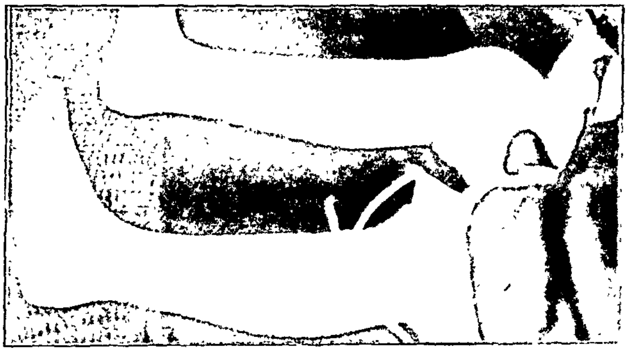
# FUNCTIONALLY GOOD RESULTS IN THE TREATMENT OF FRACTURES AS VIEWED BY SKIAGRAPH AND PHOTOGRAPH.

BY B. N. TORREY, M.D.
CRESTON, IOWA.

By functionally good results, I mean those cases where the patient has good use of the part that has been injured; if it be a leg, he walks without a crutch or cane: if an arm, it can be flexed, extended or rotated sufficiently for practical purposes.

In order to more fully demonstrate the difference between the skiagraph and the photograph of functionally good results, I have secured a series of pictures representing fractures of the limbs. These have not all occurred in my practice; a few have been treated by surgeons of reputation. They were not selected with a view of doing honor to the surgeon; had they been, I would have left out the very ones most needed to demonstrate the fact that we may have marked deformity and still have a useful limb.





248 and 249.—Fracture of leg. Four months after injury. Functional results perfect.

In offering this collection of pictures, representing the different fractures and their conditions as shown by the skiagraph and photograph, I have no apologies to offer, believing that they show just what the surgeon of the past has done, and what the majority are doing at the present time. In the examination of these, especially the skiagraphs, the first impression will be as mine was: that there must be something radically wrong in the procedure that would permit such departure from the proper anatomic appearance of the bones. Any surgeon who will look with patient honesty for an ideal re-

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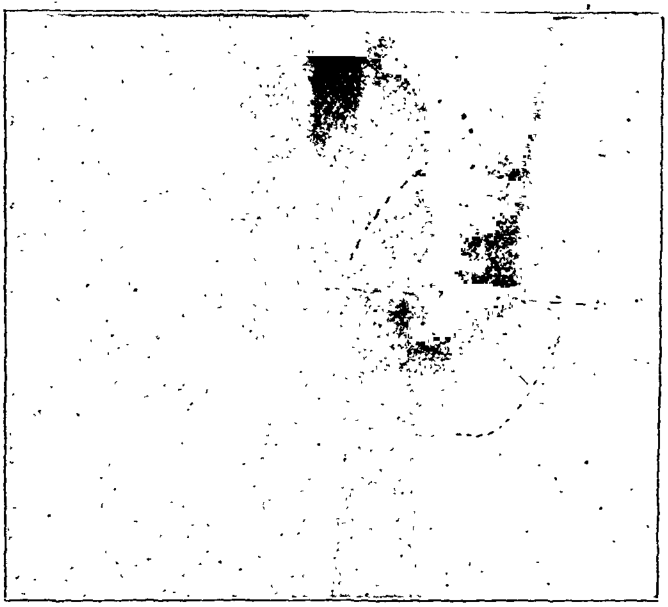
*Read before the Iowa State Medical Society, Des Moines, May 16-18, 1900.

sult, among his victims of the past, may look without finding the object of his quest, if such ideal involved the notion of exact anatomic alignment of the fragments; especially will he be disappointed if he expects such perfection in cases where the fracture was oblique or the fragments separated. He will be surprised to find that each and every one will present a deformity, more or less, of some kind, when viewed by the X-ray.

The results of a transverse green-stick fracture, or in those cases where the fragments have not been displaced, will show, from mechanical reasons only, angular or rotatory deformities; but in those fractures, buried as they are in excited muscular tissues, the obtaining and maintaining of exact anatomic relations would be an accident. It will be observed, in some of the pictures presented as illustrating this paper, that the results as viewed by photographs are all that could be desired; and others, while showing some deformities, are still within the limit of what would be considered good functional results. View the same cases by the X-ray, and it will be found to present angular rotatory and the overriding deformities, or a combination of any two or more—depending to a great extent on the bone fractured, the location of the fracture, whether a leg or an arm, a simple, compound, or compound comminuted, and the cause producing it. I am convinced that a careful, comparative study of this kind, made by any surgeon on his own cases, will smash some of his idols, will be conducive to humility, and make him cautious about critical remarks concerning the work of his fellow practitioner.

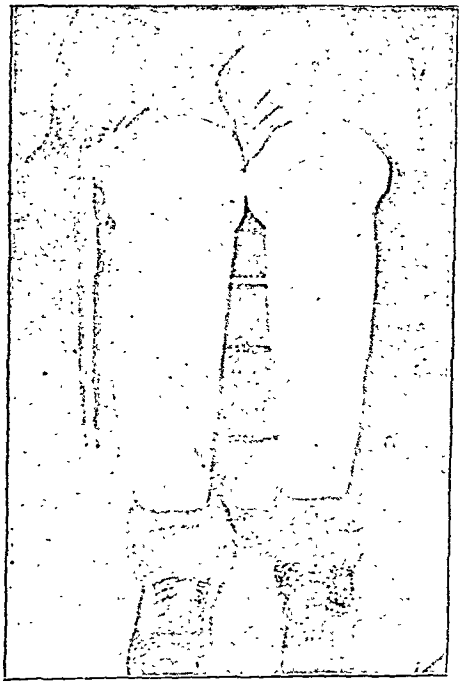


254.—Compound fracture of leg 8 months after injury. Functional result perfect. There is no shortening. The *apparent* overlapping of fragments is due to the callus.
A.—End of fragments. B.—Callus which gives appearance of overlapping.

I would ask especial attention to No. 254, a male, aged 30, and weighing 190 pounds. He jumped from a spring-wagon, producing a compound fracture of the tibia, and simple fracture of the fibula. At this time, eight months after injury, he walks without a crutch or cane, with a very little limp, and he gets off and on trains in the capacity of a traveling man. Represented by the photograph and examined by manipulation, one would consider his a splendid result, all things considered, and I was especially satisfied with it until it was skiagraphed.

It would not take the search-light of an X-ray to find a marked deformity in Case No. 258, a male of 200 pounds, who has quite a limp. He plows corn and does other work pertaining to the farm. The injury was caused by getting his foot caught in a hay-press, producing a compound comminuted fracture of both bones to the extent of leaving spiculæ of bone sticking to the hard wood of the press. Only his persistent demand that it should not be amputated is the reason that he has it in the place of a wooden one. Certainly a wooden one would be more symmetrical if not so handy. This case was treated in the early days of antiseptic surgery.

Photograph 254.



Photograph 254.

No. 248, a boy, 8 years old, was injured by a horse stepping on his leg, producing a simple fracture of both bones. As shown by the photograph and by manual examination, one would think we had an ideal result, yet by the skiagraph we find not only an angular deformity, but a partial displacement of the individual fragments.

Nos. 265 and 266 represent a fracture of the femur and humerus, *following a railroad accident in* which the leg was lost below the knee. This case was treated in a Kansas City hospital, and by a well-known surgeon, but under some disadvantages, as all the injuries occurred at the same time.

*258.—Compound comminuted fracture of leg.* Twelve years after injury. Functional result good enough that patient has but a slight limp, and does general farm work.

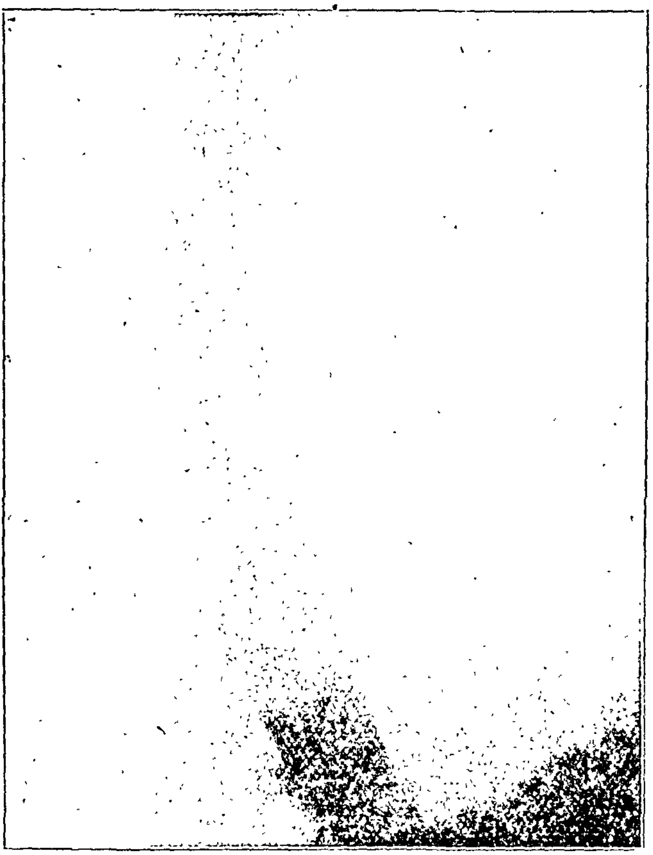
I would call especial attention to Nos. 290 and 291, which present a photograph and an X-ray picture of a compound fracture of the leg, treated by a surgeon in Kansas, eighteen months ago. The X-ray findings are good, the alignment being practically perfect, while on the other hand the photograph shows marked rotatory deformity. The patient has a stiff ankle and a limb that is far from being functionally perfect.

The examination of fractures and the results obtained, by means of the X-ray, have been almost entirely confined to the profession, and it is a question of very grave importance to each individual member. To-day you are criticising my ability as a surgeon through the representation of these pictures. To-morrow the general public will expect and demand the same privilege of looking over your work, and from the same standpoint. What will their criticism be? Have they not been led to believe, when the result from external appearance seems good and they have good use of the parts, that the union of the fragments was as smooth and complete as a cabinet-maker's splice? I do not refer to those severe crushing injuries—where they could see for themselves or where the astute surgeon has explained the probable results, if not allowed to amputate, but to those of more frequent occurrence, simple fractures of the leg or arm.

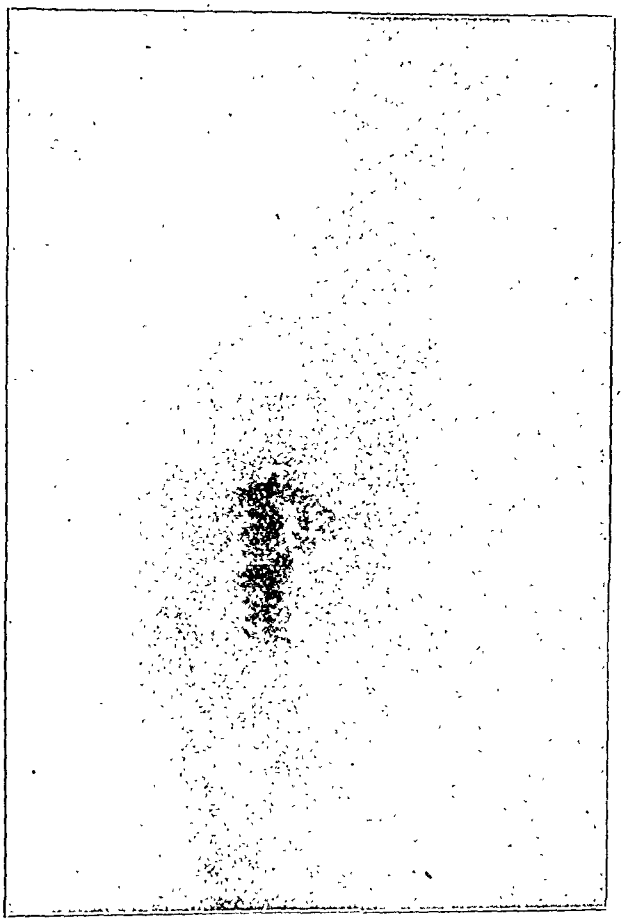
Through my investigation of fractures occurring in the limbs, with the fluoroscope and skiagraph, I have come to the following conclusions: 1. That both the surgeon and the public have believed they were attaining more perfect anatomic results than it is possible to get in the great majority of cases. 2. That the surgeon should realize and the public be taught that the getting of a good functional result without deformity, as viewed by the unaided senses, constitutes the practically ideal, and that X-ray cosmetics is a refinement beyond the reasonable hopes of this day and age. 3. That we must not expect an ideal result in oblique or any other fracture where the fragments have been separated. 4. That it would be impossible to correctly coaptate a fractured bone buried in muscular tissues, and recognize it, without the use of the *fluoroscope.* 5. That very few, if any, oblique fractures of the larger bones of the leg or arm are treated without shortening and other deformities. 6. That the public has the impression that all fractures are transverse and the surgeon should always procure an end-to-end approximation. 7. That angular deformities alone can be corrected or prevented by lateral splints. 8. That the only way we can be sure of a correct reduction would be under the fluoroscope, with an anesthetic and superextension, or by incision, with

Photograph 258.

mechanical fixation of the fragments. The use of the fluoroscope would be impossible in many cases, and the indiscriminate practice of incision would do more harm than good. 9. That oblique fracture of the tibia, when both bones are broken, is one of the hardest of fractures to treat without marked deformity—especially if it be compound or produced by indirect violence—from the fact that there is not room for traction; the stronger muscles are located on one side of the bones; there is an element of torsion in the force that produced the fracture. 10. That extension would give us less shortening, less deformity and better results in fractures of the long bones; but too much extension and too long contin-



265.—Fracture of humerus (Left) 14 months after injury. Functional result good.

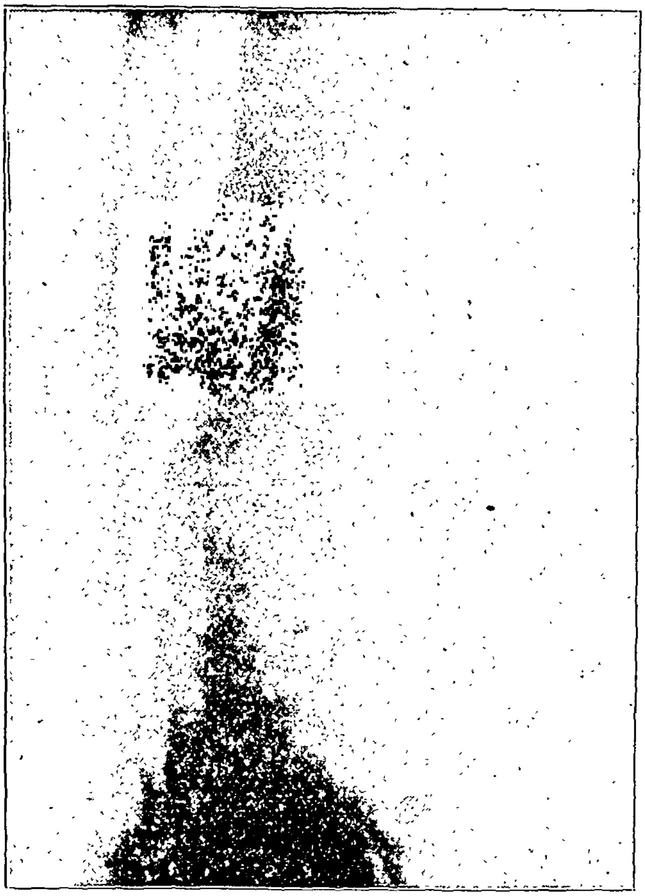


266.—Fracture of femur 14 months after injury. Result of railroad accident. Other injuries necessitated amputation of leg. Doubtless making proper extension impossible.

Photograph 265.

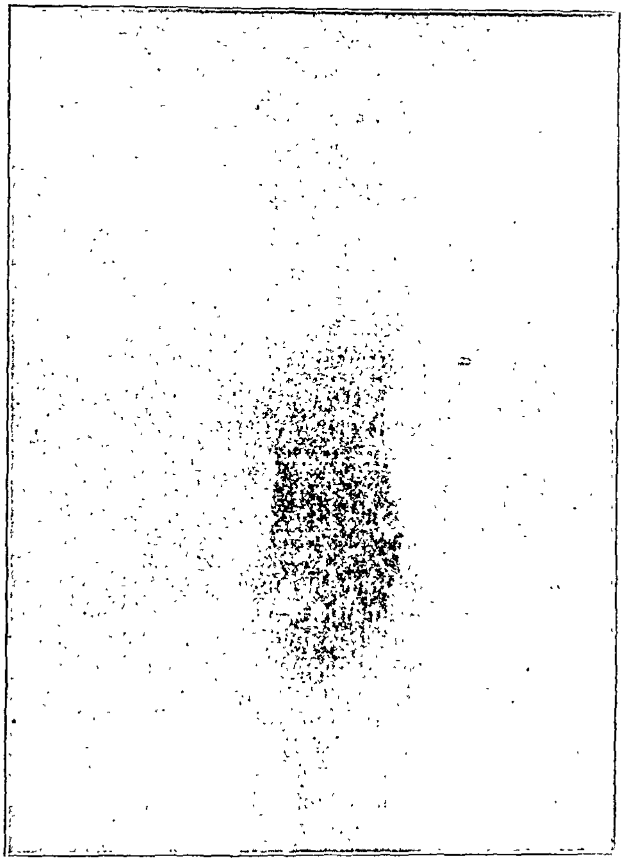
Photograph 266.

ued, would interfere with the physiologic condition of the joints, while stricture of the tissues between joints, sufficient for traction, would interfere with the circulation, and might produce blister, ulceration and non-union. 11. That weight of the limb, such as would result from the too early use after fracture of the leg, would increase or might produce deformity, in all cases except those having end-to-end approximation, and that without perceptible inconvenience or pain to the patient. 12. That a skiagraph picture may exaggerate a deformity, but it might be hard to make an interested party believe it. 13. That an X-ray picture, if interpreted according to our former notion, or the ideas now held by the general public, would be unjustly exacting for legal purposes. 14. That we may expect a mechanical device for fixation independent of muscular tissues; whether it is foreshadowed by Dr. Parkhill's clamps, the peg, screw or some other contrivance, no one can tell. 15. That

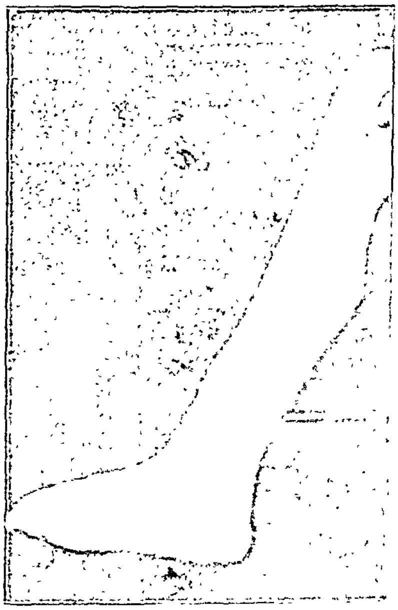


290 and 291.—Compound comminuted fracture of leg, 18 months after injury. Operation to encourage union was done 5 months after injury; another 11 months after injury. Result: good *apparent* alignment as seen by X-ray, but there is marked rotary deformity, ankylosis of ankle joint and fixation of toes in position of extreme flexion.

Photograph 290.



291



Photograph 291

every up-to-date surgeon should have access to or own an X-ray machine—a portable one would be very handy. 16. That the fractures viewed and presented in illustrating this paper, fairly present the average results obtained by the past and present methods of treating fractures. 17. That the application of the X-ray to surgery, while it presents many advantages, may also bring annoyance; but since it is here and here to stay, it behooves us to make a careful study of its findings in order that while we enjoy the advantages, we may avoid the injury that might arise from its misapplication, and prevent its being made to bear false witness through misinterpretation of its findings.

I wish to acknowledge my obligation to Dr. F. E. Sampson, of Creston, who has prepared the skiagraphs and photographs used in illustrating this paper.

# ON REMOVAL OF THE CERVICAL SYMPATHETIC IN GLAUCOMA AND OPTIC NERVE ATROPHY.*

BY JAMES MOORES BALL, M.D.

Professor of Ophthalmology in the St. Louis College of Physicians and Surgeons; Oculist to St. Joseph's Ophthalmic and Surgical Sanatorium.

ST. LOUIS, MO.

I propose to consider the surgery of the cervical portion of the great sympathetic nerve in certain ocular diseases. European oculists and surgeons have performed sympathectomy for glaucoma and exophthalmic goiter. I have gone further, and in one instance removed the superior cervical ganglion for simple atrophy of the optic nerve. I have performed sympathectomy four times up to July 20, 1899. First the cases will be reported; then the conclusions will be drawn.

### CASE 1.—EXCISION OF SYMPATHETIC FOR GLAUCOMA ABSOLUTUM.

Mrs. B. S., aged 36, has had pain in and around the right eye for two months, and examination showed vision in this eye reduced to light perception; tension +3, and the pupil widely dilated. The anterior chamber was shallow, the cornea cloudy and slightly anesthetic, the media slightly cloudy, still allowing the fundus to be seen. The episcleral vessels were enlarged. Circumcorneal injection was present and the optic nerve cupped. A diagnosis of chronic irritative glaucoma was made. The left eye presents immature cataract, and vision in this eye is 20/70.

Knowing of the flattering results obtained by Jonnesco and others, by excision of the superior cervical ganglion in absolute glaucoma, I explained the operation to the patient, and obtained permission to operate. On May 15, 1899, the patient was anesthetized, chloroform being employed. An incision four inches in length was made on the right side downward from the mastoid process, extending along the posterior border of the sterno-cleido-mastoid muscle. The external jugular vein was cut and tied. The sterno-cleido-mastoid was then separated from the trapezius muscle, and the spinal accessory nerve was cut. A deep dissection was then made, exposing the carotid sheath. This was opened to enable us to locate the pneumogastric nerve beyond question. The carotid, internal jugular vein and pneumogastric nerve were then pulled forward, enabling us to see the rectus capitis anticus major muscle, on which the superior cervical ganglion rests. Tearing through the fascia the ganglion was found and stripped. The ganglion was then cut high up with curved scissors and all its branches severed. About one inch of the trunk of the sympathetic below the ganglion was removed. The wound was closed with interrupted sutures and the neck placed in a plaster cast. The time required for operation was fifteen minutes, and immediately after it was noticed that the right eye was suffused with tears, the right conjunctiva much injected and the right nostril moist. The intra-ocular tension was +2. The patient slept well all night, without medicine, being free from pain for the first time in over two months. Tension had steadily decreased to +1.

On May 16, slight ptosis was noticed on the right side. This symptom is yet present. On May 19 the circumcorneal injection was much less; the conjunctival hyperemia and lacrimation were still present, while the ptosis was slightly increased and tension was +1.

At the present date—July 23, 1899—this patient has no pain. The retinal arteries are increased in size. Tension is +1. Vision has increased from light perception to ability to count fingers at three feet. The conjunctival injection which followed the operation has disappeared; the optic nerve has a color more approaching the normal. The ptosis is less.

This was the first sympathectomy made in America for glaucoma.

### CASE 2.—DOUBLE SYMPATHECTOMY FOR GLAUCOMA SIMPLEX.

Miss M. E., a German, aged 43, was sent to me on June 14, 1899. For two years sight had been failing, until at this time vision was as follows: R. E. = 0; L. E. = light perception. Tension was +3. Both optic nerves showed marked cupping of the disc; the vessels were pushed to the nasal side. She stated that she had never had pain in the eyes and had not consulted an ophthalmic surgeon.

I advised her to submit to an excision of the left superior cervical ganglion; she consented, and on June 15 the operation was performed by myself, assisted by Dr. E. C. Renaud, at St. Joseph's Sanatorium, in the presence of Drs. J. C. Murphy, A. R. Kieffer and S. A. Grantham. The operation was difficult owing to the abnormal position of the vagus nerve. This was outside of and external to the carotid sheath, and was much smaller than normal; it was not larger in diameter than the head of a pin. It was identified by irritating it and watching the effect on the heart. The superior cervical ganglion was removed and one-half inch of the trunk of the sympathetic below. Shortly after the operation there was lacrimation, ocular congestion and contraction of the pupil on the corresponding side. On the second day she counted fingers at 2½, and on the third at 3½ feet. Slight ptosis was present.

She left the hospital on the eighth day. At this time she counted fingers at four feet. There was only slight if any reduction of tension during the eight days she was in the hospital. In counting fingers she saw the nasal side of the retina—temporal field. I did not see her again until June 30, and she was then counting fingers at five feet. Tension on that day was normal. She had light perception in the right eye.

On July 16, I excised the right superior cervical ganglion, without difficulty, and on July 7 she counted fingers at seven feet with the left eye, and could see the hand at four inches with the right. I examined her on July 20, when vision remained the same, the tension of the right eye was +1, and of the left +2. She was well pleased to have the small amount of vision she possessed.

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*Reread before the Ninth International Ophthalmological Congress, at Utrecht, Aug. 17, 1899.

CASE 3.—SYMPATHECTOMY FOR OPTIC NERVE ATROPHY.

T. J., aged 46, an inmate of the St. Louis City Hospital, a laborer, was admitted on account of blindness. There was no history of syphilis, rheumatism, nor any systemic disease. The patient was of limited mentality. No history of his family could be obtained. He claimed to have had good health all his life, with the exception of an attack of malarial fever several years ago. The patient had been a moderate drinker of alcoholic beverages. In appearance he was robust, and he complained only of loss of vision, which, in the left eye had been failing for eleven months, in the right for seventeen weeks, according to his statement. Until seventeen weeks before this he could see enough with the right eye to get around. Since then vision had steadily declined until he had light perception only—and this only apparent when light was concentrated on the eye by the ophthalmoscopic mirror. Vision of the left eye = 0.

The pupils were widely dilated. The ophthalmoscope showed, in the right eye, a white disc, particularly on the temporal side; the arteries slightly reduced in caliber, veins normal. There was shallow, atrophic cupping of the nerve head. The retina and choroid were normal, the vitreous and lens clear. The left eye showed a disc of a dead white color throughout the whole area, arteries very small, atrophic excavation pronounced, veins reduced in caliber, and choroid normal. The macula was not visible in this eye, owing to the much reduced blood-supply. The vitreous and lens were clear. Vision was as follows: R. E. = perception of concentrated light. L. E. = 0.

Microscopic Appearance of Section of Normal Superior Cervical Ganglion.

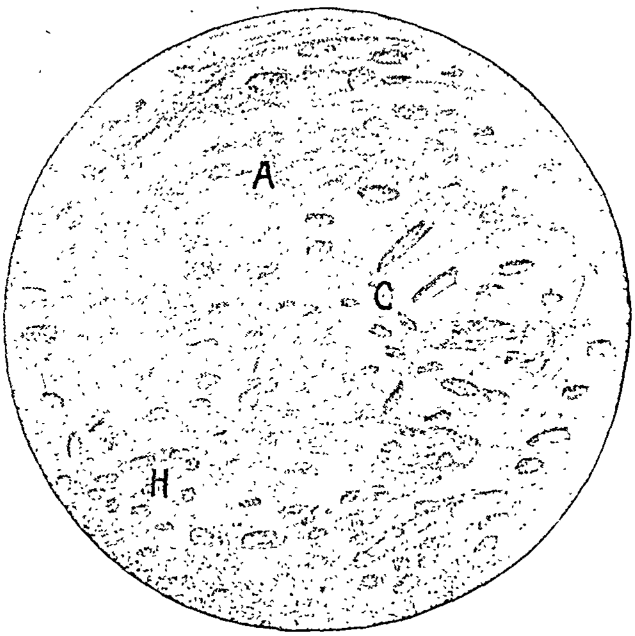

Fig. 1.—(Leitz, No. 3 objective, No. 4 ocular)—A, connective tissue; H, blood vessel; C, nerve cell.

Diagnosis: R. E. = optic nerve atrophy. L. E. = complete atrophy of optic nerve and retina.

Treatment: Resection of the right superior cervical ganglion of the sympathetic was done. The operation was followed by conjunctival congestion, lacrimation and contraction of the pupil, slight ptosis and hypotonia.

No appreciable change in the patient's vision followed, and ophthalmoscopic examination made two weeks after operation showed no change in the appearance of the fundus, except that a cilioretinal artery in the upper part of the disc had doubled in caliber.

So far as I know, Case 3 is the first instance in the history of medicine of an excision of the superior cervical ganglion, or of any part of the sympathetic system, for the relief of optic nerve atrophy. Although the operation was not of benefit in this particular instance, yet I am not willing to concede that it will prove valueless in cases of non-inflammatory atrophy in which vision is not entirely lost. In truth, I expect it to prove beneficial in such cases, sufficiently often to justify the procedure.

I was led to make this experimental operation for several reasons: 1. The use of glonoin is often followed by an improvement in vision in cases of simple atrophy of the optic nerve. 2. Glonoin enlarges the retinal vessels, as has been proved by ophthalmoscopic examination. 3. There is no question that in glaucoma simplex—a disease in which there is an atrophy of the optic nerve—improvement in vision follows sympathectomy. 4. Excision of the cervical sympathetic is followed by an increase in the blood-supply of the orbital contents.

Microscopic Appearance of Section of Normal Superior Cervical Ganglion.

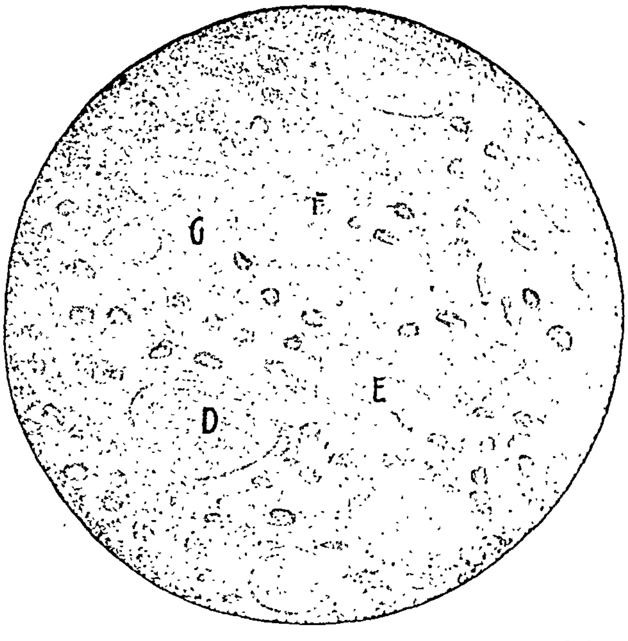

Fig. 2.—(Leitz, No. 7 objective, No. 4 ocular)—D, nerve cell; E, blood vessel; F, connective tissue; G, nerve fibers.

PATHOLOGIC CHANGES IN THE EXCISED GANGLIA.

The microscopic examination of three of the excised ganglia was made by my friend, Dr. Carl Fisch, of St. Louis. The specimens were those from Cases 1, 2, and 3. Of the two ganglia removed from Case 2, only the first one—the left—was examined.

Transverse and longitudinal sections of the three specimens were studied microscopically, by means of a great number of different staining methods. Owing to the method by which the ganglia had been preserved—weak formalin solution—the employment of the *Golgi—Marchi*—and the more delicate Nissl stains was rendered impossible. In general it may be said that the pathologic changes found were the same in the three cases, although a little less pronounced in No. 2 than in 1 and 3.

Most striking of all was a very marked hyperplasia of the connective tissue, which in some places resulted in dividing up the ganglion into small groups of nervous elements separated by broad bands of fibrous elements.

The walls of the vascular structures showed decided sclerosis; the connective-tissue sheaths of the ganglionic cells were much increased in thickness. In Case 1, small foci of round-cell infiltration were seen in this hyperplastic growth, of an inflammatory character. No plasma nor mast cells could be demonstrated.

The ganglionic cells were markedly pigmented. Together with a number of cells normal to all appearance there were great numbers showing different stages of degeneration. As a rule the nucleus, besides having lost part of its peculiar staining property, had assumed the parietal position; the nucleus was reduced in size or even missing in a large percentage of the cells. While in some cells the chromatic elements were well preserved, in others the process of chromatorhexis and chromatolysis could be followed up through all of its stages. Only comparatively few cells were seen showing the normal dendriform processes; very often the processes were short, ending bluntly, or they had even disappeared altogether. The general peripheral network of processes was much reduced in volume and compressed by the pressure of the connective-tissue formation. Only very few medullated fibers were seen. Unfortunately it was impossible to study their structure with the Marchi method.

Microscopic Appearance of Section of Superior Cervical Ganglion in Chronic Irritative Glaucoma (Case 1).

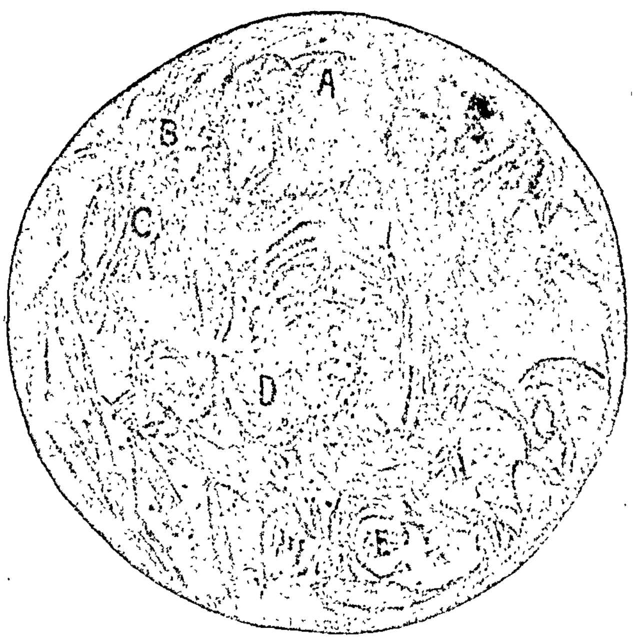

Fig. 3.—(No. 4 ocular, No. 3 objective, Leitz)—A, nerve cell; B, nucleus of connective; C, connective tissue; D, vein; E, small capillary.

The general pathologic aspect was that of a decided sclerosis, originating in inflammatory processes going on in, and starting out from, the walls of the vascular structures. The changes of the nervous elements were most likely not idiopathic, but due to pressure and inhibited nutrition.

The plates accompanying this paper have been made from drawings of sections of superior cervical ganglia.

TECHNIQUE OF THE OPERATION.

The ordinary precautions for surgical cleanliness are to be observed, and general anesthesia employed. The incision should be made along the posterior border of the sterno-cleido-mastoid muscle, starting at the mastoid process and running downward to within an inch of the clavicle. The sternomastoid is separated from the adjacent muscles, the spinal accessory nerve cut and the carotid sheath reached. This dissection is made with the fingers. The carotid sheath should always be opened in order to locate the pneumogastric nerve. I consider this very important because: 1. The nerve is sometimes outside the sheath, as happened in my second case in which the pneumogastric was much atrophied and was external to the sheath. 2. Differentiation of the cervical sympathetic from the vagus is sometimes difficult. Often, in operating on the cadaver, I have found both nerves enclosed in the same fascia. It is needless to say that excision of the vagus instead of the sympathetic would not only defeat the object of the operation, but would add a serious complication. Differentiation of these nerves after opening the carotid sheath is not usually difficult, for in working upward the operator comes upon the ganglionic expansion of the sympathetic. The ganglion is seized with forceps and stripped. Its branches are cut first, then the cord passing below is severed, and lastly the ganglion is cut above, as high as possible. It is best to use curved scissors and to have the finger under the ganglion while traction is made, thus cutting on the finger and avoiding injury to the underlying structures.

Microscopic Appearance of Section of Superior Cervical Ganglion in Chronic Irritative Glaucoma (Case 1).

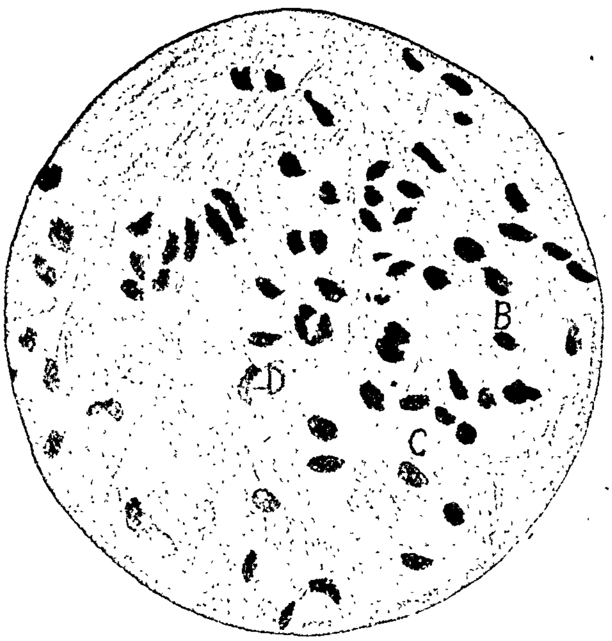

Fig. 4.—(No. 4 ocular, No. 7 objective, Leitz)—A, nucleus of connective tissue; B, nerve cell; C, connective tissue; D, vein.

If the middle ganglion is to be removed, it will be best to excise it first and then work upward. If the entire chain of the sympathetic is to be removed, as is done for epilepsy, and as is now advised in exophthalmic goiter by Jonnesco, the operation is one of great difficulty owing to the location of the inferior ganglion. This is situated near the neck of the first rib. One of my friends, who is a skilful surgeon, in removing this ganglion ruptured the vertebral artery near its origin and was obliged to tie the subclavian to check the hemorrhage. After the latter has ceased the wound is closed with superficial sutures. The hemorrhage in removal of the superior ganglion is usually trifling, only a few small vessels being cut. The external jugular vein was cut in my first case, but not in the others. The patient leaves the hospital on the eighth or ninth day.

Jonnesco's[1] method, according to his latest communication on the subject, is different. He always employs the premastoid route where only the superior ganglion is to be removed, reserving the postmastoid for the excision of the entire chain. The carotid sheath is split, the internal jugular vein and sternomastoid drawn outward by a retractor; a second retractor draws the vagus and internal carotid inward. In the space made the superior ganglion is found. The deep vertebral fascia is opened, all the brances of the ganglion isolated and cut by blunt, curved scissors; when this has been done the ganglion is attached only by nerve strands above, a strong pull is made and the ganglion gives way. The excision is then completed by cutting the inferior strands. In closing the wound, he uses both deep and superficial sutures.

He mentions a transient dysphagia and pain in the craniomandibular joint as occurring after this operation.

### EFFECTS OF EXCISION OF SUPERIOR CERVICAL GANGLION.

The effects of removal of this ganglion are immediate and remote: The immediate are relief of pain, lacrimation and conjunctival injection, together with a discharge from the corresponding nostril, unilateral sweating, and contraction of the pupil. Often there is an immediate reduction in intra-ocular tension. These effects are noted within five minutes after the excision.

**Microscopic Appearance of Section of Superior Cervical Ganglion in Glaucoma Simplex (Case 2).**

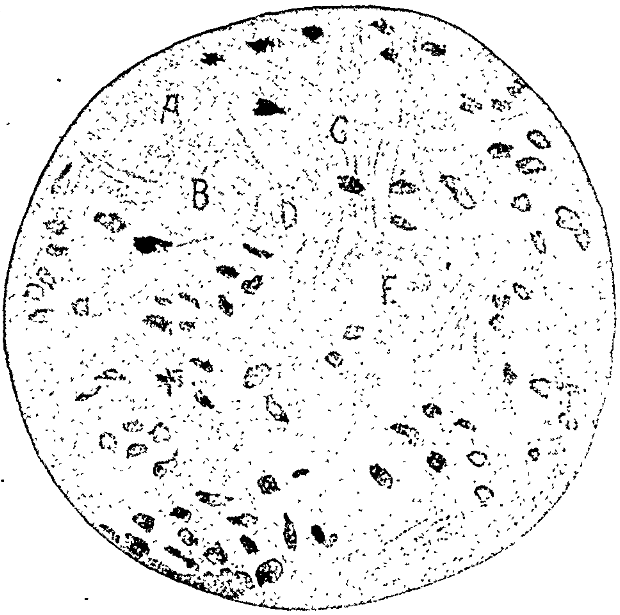

Fig. 5.—(No. 4 ocular, No. 7 objective, Leitz)—A, vein; B, connective tissue; C, nerve cell; D, small capillary; E, larger capillary; F, nucleus of connective tissue cell.

The remote effects are ptosis, which appears on the third or fourth day, improvement of vision, and in some instances a tardy contraction of the pupil and a tardy reduction of the intra-ocular tension. To these there must also be added a slight sinking of the eyeball into the orbit, and a feeling of heaviness in the head. What I have just written applies particularly to cases of glaucoma.

In exophthalmic goiter, after the excision of the ganglia, the exophthalmus and tachycardia are said to improve almost immediately and a reduction of the goiter soon follows.

Although Jonnesco speaks of the immediate reduction of the intra-ocular tension, yet this does not always occur. In my second case, at the end of eight days the tension was +2. On the sixteenth day the tension was normal. In my first case reduction of the tension was immediate. The relief from pain in the first case was immediate and lasting. This patient had not been free from pain for two months previously. The slight ptosis following sympathectomy is to be attributed to paralysis of Müller's muscle. Sinking of the eyeball is no doubt due to paralysis of the unstriped peribulbar fibers found in Tenon's capsule. Contraction of the pupil is usually an immediate result; it may, however, appear tardily. Thus in my first case the pupil was unchanged until the fourth day after the operation; and it did not become at any time as markedly contracted as in the other two patients. In the third case—that of optic nerve atrophy—the pupil was markedly contracted within five minutes after the excision.

The lacrimation, conjunctival injection, and nasal moisture are transient symptoms which are usually absent after the first day.

In this connection it is interesting to note that Mr. Jonathan Hutchinson, as early as 1866, recognized many of the ocular symptoms of paralysis of the cervical sympathetic, and wrote a paper thereon.[2]

### HOW DOES EXCISION OF THE CERVICAL SYMPATHETIC REDUCE INTRA-OCULAR TENSION?

This is a question difficult to answer—difficult for the reason that we are not sufficiently acquainted with the physiology of the production of aqueous humor under normal surroundings. Panas and Duvigneaud have assumed rightfully that "If the nervous mechanism of intra-ocular secretion or, to speak without hypothesis, the action of the nervous system on intra-ocular tension can be known, the pathology of glaucoma will be cleared up, iridectomy will be explained, and perhaps a new and scientific basis for the treatment of glaucoma will be established."[3] Many observers have sought to solve the problem. Donders attributed the hypertension to a neuro-secretory cause and believed the trigeminus to be the agent of excessive secretion. He held that section of the trigeminus should relieve intra-ocular tension, while section of the cervical sympathetic could have no particular influence.

**Microscopic Appearance of Section of Superior Cervical Ganglion in Simple Atrophy of the Optic Nerve (Case 3).**

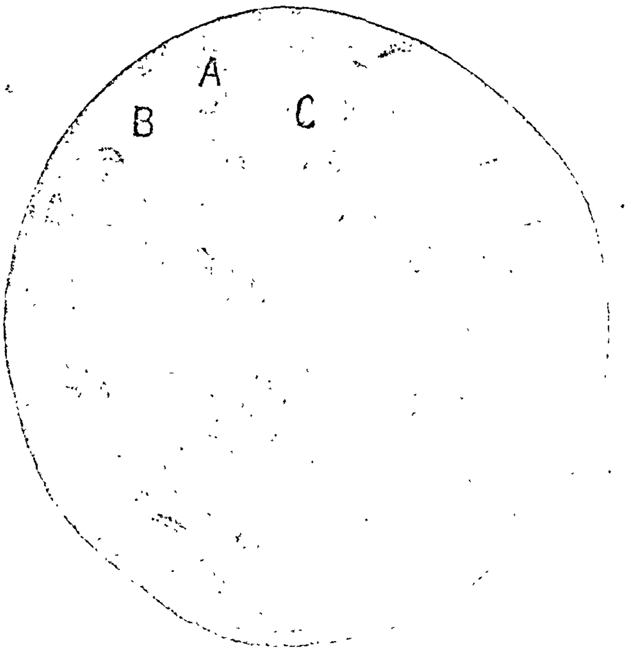

Fig 6—(No. 4 ocular, No 7 objective, Leitz)—A, connective tissue; B, nucleus of connective tissue; C, nerve cell.

His views were overthrown by experiments made by Wegner in 1866, on rabbits. By means of manometers placed in the anterior chamber, he sought to record variations in the intra-ocular tension. He proved to his own satisfaction that the trigeminus takes no part, while section of the cervical sympathetic produces hypotonia, and irritation of its upper end, and causes hypertonia. He held that section of the cervical sympathetic enlarges the blood-vessels of the eye; the blood then flows under reduced pressure, and intra-ocular secretion is lessened. Almost identical results were obtained by Adamück—1866-68—who experimented on cats.

Von Hippel and Gruenhagen believed that the cervical sympathetic contains vasoconstrictor fibers for the eye. Their experiments were made on cats and dogs. They found that irritation of the upper end of the cervical sympathetic causes in the cat a hypotonia, while its extirpation increases intra-ocular tension. While, according to Wegner, the hypotonic action proceeds from the enlargement of vessels caused by cutting the cervical sympathetic, and the contraction of the blood-vessels caused by the irritation of the nerve causes a hypertonic action, the contrary view is held by Adamück, Von Hippel and Gruenhagen.

However this may be, there is no doubt that the trigeminus plays no great part in the production of ocular tension. Furthermore, the inefficiency of Bedal's operation—stretching the nasal nerve—is explained by the fact that it is the cervical sympathetic, and not the trigeminus, which influences intra-ocular tension.[4]

Jonnesco believes that the ocular sympathetic fibers from the brain and spinal cord pass through the superior cervical ganglion; permanent or intermittent irritation of these is accompanied by dilatation of the pupil, narrowing of the small intra-ocular arteries, contraction of the peribulbar muscular fibers, and probably an increased action of the elements which produce the aqueous humor. "As a matter of fact," says Jonnesco, any increase of the blood-pressure will produce a permanent or intermittent narrowing of the arteries and cause the extravasation and increase in aqueous humor; then it is probable, although not definitely settled, that a permanent or intermittent irritation of the excito-secretory fibers is followed by an increase in the secretion of aqueous humor; the permanent or intermittent dilatation of the pupil pushes the iris into the iris-angle, closes the canals of the filtration zone, and hinders or prolongs the exit of aqueous humor from the eye; the permanent or intermittent contraction of the unstriped peribulbar muscular fibers closes the efferent veins of the eyeball, and hinders the venous circulation of the eye—hence the dilatation of the intra-ocular veins.

He holds that excision of the superior cervical ganglion destroys all vasoconstrictor fibers of the eye. The arteries relax, the blood-pressure is lowered, and extravasation is reduced. This operation destroys the excito-secretory fibers, thus limiting the amount of aqueous produced. The fibers which dilate the iris are destroyed, hence the contraction of the pupil reopens the iris-angle and removes the obstacle to the outflow of aqueous. The nerve-fibers supplying the unstriped muscular apparatus, contained in Tenon's capsule, are destroyed, hence the pressure on the efferent veins is removed and ocular circulation is re-established.

Jonnesco believes that the starting-point of the nervous derangement producing glaucoma is central: "When one removes the ganglion the point of origin of the influence will not be removed but the communication between this center and the eyeball is destroyed."

Regardless of the differing views of physiologists concerning the mechanism of the reduction of ocular tension, based on experiments made on the lower animals, there can be no difference of opinion concerning the effect of excision of the superior cervical ganglion in the human subject. The operations made by Jonnesco, and others on the Continent, and by myself in America, prove that removal of the superior cervical ganglion causes a marked reduction of intra-ocular tension in glaucomatous cases. That the same effect occurs in eyes with normal tension is evident from my third operation—that done for optic nerve atrophy.

### EXTENT OF SYMPATHECTOMY IN DIFFERENT DISEASES.

Up to the present time excision of the cervical sympathetic has been performed for the following diseases: epilepsy, exophthalmic goiter, glaucoma and optic nerve atrophy. The question naturally arises: How extensive an operation is necessary in these affections? This I will attempt to answer:

In epilepsy it is necessary to excise the entire cervical chain on both sides for the reason that, according to Jonnesco's theory, it is necessary to convert a state of cerebral anemia—which he assumes is the condition in epilepsy—into one of cerebral hyperemia. Since the carotid plexus is formed by branches from the superior ganglion, and the vertebral plexus arises from branches which have their origin in the inferior cervical ganglion, it is evident that the entire cervical sympathetic must be removed.

In exophthalmic goiter, although Jonnesco in his first operation excised only the superior and middle ganglia, he now believes it necessary to remove the inferior as well, for this reason: from the superior ganglion the ocular fibers arise; from the inferior the vasodilator, cardiac-accelerator, and, probably, the secretory nerves of the thyroid gland. If eye, thyroid and cardiac symptoms are to be relieved the entire chain must be excised.

In glaucoma removal of the superior ganglion alone is necessary. All of the sympathetic fibers of the eye, with the exception of those which pass directly from the cerebrum by way of the trigeminus, are connected with the superior ganglion.

In optic nerve atrophy, if it should be proved that non-inflammatory atrophy of the optic nerve can be improved by sympathectomy, removal of the superior ganglion alone will be necessary, for reasons already given.

If the glaucoma is unilateral, it is necessary to remove only the corresponding ganglion.

### HISTORY OF SYMPATHECTOMY.

In 1889, Alexander, of Edinburgh, resected the superior ganglion on both sides. In 1892 Jacksh resected the vertebral plexus and cut the cord connecting the middle and inferior ganglion. The third operator was Kummel, who excised the superior ganglion on one side only. In 1893 Bojdanik made a bilateral resection of the middle ganglion. In 1896 Jaboulay made a bilateral section of the sympathetic cord, above and below the middle ganglion. These operations were all made for epilepsy.

In regard to exophthalmic goiter, Jaboulay made a simple section of the sympathetic early in 1896. In September of the same year Jonnesco excised the superior and middle ganglia.

Jonnesco was the first, in 1896, to do a bilateral resection of all three cervical ganglia, though it is claimed by a Polish surgeon, Baracz, that he proposed the same in 1893. To Professor Jonnesco furthermore belongs the credit of having first excised the superior ganglion for glaucoma in September, 1897.

Ball, of St. Louis, was the first to remove the superior cervical ganglion for optic nerve atrophy. The date of this operation was June 24, 1899.

Terrier, Guillemain and Malherbe, in their "Chirurgie du Cou," 1898, were among the first to give the surgery of the sympathetic a place in a text-book.

Among those who have operated on the cervical sympathetic for the relief either of glaucoma or exophthalmic goiter, or both, are Abadie,[5] Réclus,[6] Gerard-Marchant,[7] Chauffand and Quénu,[8] Jeunet,[9] Bled,[10] Ball, Renaud, and Bartlett.[11]

Panas is opposed to sympathectomy in glaucoma.[12] He reports seeing a patient in whom, three months after the operation, vision was still declining.

Francois-Frank,[13] at a meeting of the Paris Academy of Medicine, held May 23, 1899, spoke of the effect of sympathectomy on the circulation of the thyroid gland, brain, and eyes, and on the heart. He believes that the operation can easily produce good results.

Doyon[14] has described the trophic changes produced in the rabbit by excision of the cervical sympathetic.

### CONCLUSIONS.

From a study of the cases of sympathectomy made by Jonnesco and others, and from the observation of my own cases, I offer these conclusions:

1. Excision of the superior cervical ganglion is a most valuable procedure in glaucoma.
2. It is of more value in glaucoma simplex than in inflammatory glaucoma.
3. In inflammatory glaucoma, on which iridectomy has been done without benefit, excision of the superior cervical ganglion should certainly be tried.
4. In cases of absolute glaucoma with pain, sympathectomy is to be tried before resorting to any operation on the eyeball.
5. In cases of simple optic nerve atrophy, sympathectomy may possibly be beneficial if done before vision is entirely lost.
6. In cases of exophthalmic goiter, which do not improve under hygienic medicinal and electric treatment, excision of the cervical sympathetic on both sides is to be advised.
7. In unilateral glaucoma excision of the sympathetic ganglion is to be done only on the corresponding side.
8. In the hands of a careful operator, excision of the superior and middle ganglia is a safe operation but removal of the inferior ganglion can be done safely only by the most skilful surgeons.
9. The postmastoid route is to be preferred in excision of any part, or all of the cervical sympathetic.
10. The fact that glaucoma is improved by sympathectomy and the finding of pathologic changes in the excised ganglia suggest the conclusion that this affection is due either to a permanent irritation of the cervical sympathetic, or to an irritation located elsewhere and transmitted by means of the cervical sympathetic.

I wish to extend my thanks to Drs. E. C. Renaud and Willard Bartlett for valuable assistance in the preparation of this paper; to Dr. Carl Fisch for the pathologic report; and to Dr. R. B. H. Gradwohl for the illustrations.

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# THE DOCTOR IN THE PUBLIC SCHOOLS.*

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Shall we put a well-educated physician in each of the public schools? is a question; and if not why not? Let it be a physician who will make a thorough study of the pupils, classify them with reference to their physical and mental development and aptitude, both for study and play.

Without bone and muscle and without a plentiful supply of wholesome blood, the brain and nervous system can not long remain intact and properly perform their respective functions. The daily expenditure of brain energy and nervous force must necessarily have its corresponding recuperation by sound sleep, proper food, and wholesome exercise in the open air. This applies to all classes and conditions of ages, and especially to school children.

The excellence of the public school system everywhere is conceded. It is apparently almost perfect. The present system of education is broad, comprehensive, and fulfils the order of discipline in the extreme. It teaches effectively and well. Its superintendents, principals and splendid army of teachers are all, without exception, thorough. The youth of the land are yearly made better and better by the unselfish devotion and self-sacrificing efforts of the teacher.

The sanitary boards and bureaus of public health are likewise very quick to look after infection, and to quarantine the school in case of an epidemic of disease. They inspect the schools and the homes of the children, and in general perform a very efficient service, which concerns not only the school and the homes of school children, but the community. They are prompt in preventing the spread of infection, by quarantine, disinfection, etc. The law has, it is true, given them only limited powers, but it will give them more and better ones in the near future. To prevent disease ought to be, and is largely, the high ambition of physicians, as well as of the public generally. Medical men, of all people, know well the nature of diseases, and the extent and severity of their prevalence. They know a well-nourished and strong body when they see it, but likewise, and as a consequence, the well-nourished and well-supported brain and nervous system. The one is the necessary complement of the other. Brain energy and nervous force anticipate a sound, strong body. A vigorous, active brain must have a rugged physical make-up to support it or it will weaken, dwarf, and get out of balance sooner or later; it will become one-sided; some of the faculties will go wrong, and the beauty and harmony of all the faculties that go to make up a well-ordered brain will be marred, and sometimes almost totally destroyed.

To study the aptitude of each individual child, and take a careful survey of his physical construction, is the only sensible basis in any attempt at a classification of the pupils for the purpose of instruction. Without such a basis of classification harm is being done every day in our present system of teaching, resulting, in many instances in an irreparable injury to both the mind and the body. Any school system that educates the mind—the faculties, the intelligence—of the child, at the too great expense of the body, is vicious, radically wrong, and must be corrected. This is not being done, but it is here and there gaining the attention of the school boards and the physicians and educators generally, and the dawn of a new era in our present methods of classifying pupils will speedily come to pass. State medicine, if given the power, will put humanity on a better footing by producing, and wisely training, a more vigorous progeny, more free from disease, deformities and imperfections of all kinds.

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*Presented to the Section on State Medicine, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

The extent to which the world has gone mad on the subject of education and the refinements is not only remarkable, but it is appalling. No sensible parents force their child to eat the same quantity and kind of food. Why not take each individual child into account and study him from his own individual standpoint? Surely the nourishment, growth and development of the body, at the least, can not be hindered thereby. The same kind of sports and harmless indulgence that is well suited to the one child may not prove so wholesome to the other. The great plan of creation contemplates all these individualities, both physical and mental, and the respective environment of each—all these differences in the mental and physical wants of the early life of its creatures.

In the army and navy, the physican plays a very important part in selecting the individuals who compose the rank and file of good soldiers and splendid sailors, by a close, systematic scrutiny from his professional standpoint, of the whole make-up, physical and mental and moral, of the candidate. The ranks of the police and fire departments of the cities are likewise guaranteed at the hands of the physician. How much more important is it that the children in our schools should be carefully examined by him so as to secure to all of them the greatest and best development as a whole, and thereby guarantee to each child the true, wise, and harmonious measure of right development of body, mind, and heart that his birthright proclaims shall be his. Out of the human beings thus educated, there must necessarily be a grander and a more satisfying prospect of getting at all times better leaders for all the avocations of life.

The physician in the schools should be quite independent of the school board, the superintendents, and the teachers, and be connected, if you please, with the department of health, and be responsible to the head of this department, and to him alone. What the physician could do, in a generation, would make such a splendid showing in the direction of the right development, both physical and mental, as well as moral, that every thoughtful parent and citizen would be lifted up and relieved of, in great measure, the terrible load of discouragement and disappointment that is now daily and yearly being meted out to so many of our most hopeful people. But let such physicians be none other than those who are well disciplined, of broad views and scholarly attainments. Let their knowledge of human nature in general and of children in particular be of the broad type, and not second in importance to their attainments in anatomy, physiology, hygiene and mental science, and practical medicine.

Exercise the body, if you would preserve and sustain an active mind. Physical exercise stimulates the circulation which regulates waste and repair, cell birth, cell growth and cell development. It is a powerful stimulant of all the vital forces. Physiologic exercise is needful to every boy and girl; much more is it needed with those children who are born apparently at some disadvantage with the world—the ones whose degree of physical or mental vigor is below par. The soil for these should manifestly be a little different than for the others, and their exercise should be modified. This can easily be done by a proper classification. As it now is each public school may be compared to a big funnel or hopper into which boys and girls are annually shoveled and come out dead, dying, distorted, deformed, disfigured—yes, and depraved too in some instances—specimens of the race with only a few who are at all fitted to survive the struggle of life's great battle.

Such an annual educational exhibit, if you bunch them all together, might with little impropriety, as well as with a great deal of respect for veracity, be at least to a large extent truly styled an exhibition of vanity, perverted tendencies and a disqualification, as well as a disinclination to grasping things practical and things real. Such an exhibition, such education, truly does not bespeak nor guarantee an abiding and enduring civilization.

What is the substantial, the only safeguard to an enduring civilization? Truly, first of all a progeny that is born right, sound to the core, with physical, mental and moral breeding of a high order to start with, so that when educated and trained and disciplined, it will exhibit strength, resource, power. Such a progeny, and such alone can build a civilization that will live long and weather the storms of adversity and harvest in abundance the precious fruits of useful and wholesome living—such a progeny will beget a still higher order of beings, and in this way essentially and truly is mankind lifted up; in this way is man everlastingly benefited; in this way does he crown with brightness and glory the ever hopeful tendency; in this way does the Spirit who made us all mete out to us our greatest blessings; in this way as a result of a truer and better education do we creatures after the law harvest the golden sheaf of righteousness, which is the prime, the beautiful result of all education. Amen, then, to our public schools! They truly are the great bulwark of our present civilization. Let us educate, and educate and educate, but let us do it rightly so we may have the greater and better if not the greatest and best, results for the efforts put forth in this direction.

As an adjunct, then, to the cause of education, as a potent factor for good results along the lines of a better classification of the pupils for purposes of instruction; as a teacher of sanitation, hygiene, etc., with all that these terms imply, I cheerfully recommend to the school boards and educators and people at large the services of the good, the thoughtful and up-to-date American physician. He truly knows the importance of building or securing a large school-yard or playground first, and then the modest school-house afterward, with proper air and light and heat and water and proper sanitation in general. He knows better than others the nature of the diseases that affect mankind at large and school children in particular. His usefulness in preventing disease and thereby benefiting the public health is of no mean proportion. His knowledge of the varying types of infant and child life, of its growth and development, certainly makes it quite natural that he should be chosen by the school board or by the state to arrest and prevent disease and lend his voice in the selection of the proper and wholesome course of study. That the doctor in the school will do an efficient and useful service to the pupils and the community at large, no thoughtful observing person will deny. That the cause of education will be better served and achieve better and more lasting results must likewise be admitted. That his assistance will render the pupil to a greater extent mindful of his individual and personal wants and needs, must also be conceded; because he of all persons knows human wants and needs and suffering in a way that no other person does. It is he who well knows the importance of the strong and vigorous body, without which the mind must sooner or later give way, or become unbalanced and distorted.

A good physician in every public school in the land will, in one single generation, bestow on mankind a far richer heritage than the present system of teaching and the present method of doctoring. It is high time that the very worthy teacher and the capable physician should get together in our public schools, that the children of the land may suffer less, have less sickness and disease and death among their ranks, and have a training and discipline and an imparted knowledge vastly more suited to their individual and personal wants and relative environment. It is too much to ask or expect all of this at the hands of the teacher, who is of all people truly burdened with tasks and required to teach pupils more than twice too much. It is neither necessary, nor does it educate, in the broader sense of the term. Who of us as grown, mature individuals does not know how trying it is on both the mind and the body to undertake to do too many things at once? What a strain and what, in many instances, are the results obtained? Usually not what one would wish.

The task to be performed must be measured by the capacity to do or perform; not only the mental effort, but the physical force or vigor necessary to support that effort. Again, I repeat, let us classify the pupils not only with reference to their mental aptitude, but also to the degree of health and physical vigor necessary to support that aptitude. This, then, I conclude, as I stated in the beginning of my short paper, is the prime basis for classifying pupils for purposes of instruction, and without this basis of classification there can be no progressive, as well as the most highly productive school work.

## TUBERCULOSIS IN COLORADO.

### METHODS OF DISSEMINATION AND MEASURES FOR ITS RESTRICTION.*

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The records of the Denver Bureau of Health show the following mortality from tuberculosis:

| Years | 1893 | 1894 | 1895 | 1896 | 1897 | 1898 |
|---|---|---|---|---|---|---|
| Total deaths from tuberculosis | 435 | 377 | 428 | 368 | 489 | 501 |
| No. specified as contracted in Colo. | 49 | 51 | 64 | 66 | 88 | 99 |
| Per cent. contracted in Colo. | 11.26 | 13.52 | 14.95 | 17.93 | 17.99 | 19.77 |

This steady increase of the number of deaths from tuberculosis contracted within Colorado is sufficient to merit the earnest attention of all who are in any way interested in the prevention of the unnecessary spread of disease. At the August meeting of the Executive Committee of the State Board of Health, the secretary and Dr. J. N. Hall were authorized to seek a conference with the governor, the state dairy commissioner and the state veterinarian with a view to outlining a plan whereby the unnecessary spread of this disease might be restricted. An informal conference was held Sept. 26, 1899, and on September 30, the two last named officials met with the executive committee for a full discussion of the problem. Owing to its far-reaching importance, and in order that there might be the largest possible collection of data, adjournment was had for three months and the parties to the conference were directed to obtain all information possible. The scope of the inquiry conducted by the State Board of Health has included all possible sources of infection known to sanitarians. For all practical purposes these sources of infection may be divided into three classes, as follows: 1. The expectoration of consumptives. 2. The milk from tuberculous cows. 3. The flesh of tuberculous animals. This does not mean that other sources may not exist, but no others of importance are known to exist. Of course it has been proven that tuberculosis is transmitted by heredity. But these cases are so rare that this possesses merely an academic interest; and it would doubtless augur better for sanitary control of this disease if people's minds were disabused of the idea that heredity is a factor of any importance in the actual transmission of the disease. Of course, too, the disease has been acquired by accidental inoculation, as during a surgical operation or an accidental cut at an autopsy. But so far as present knowledge goes the sanitarian is concerned with the three sources mentioned, and with no other.

*Expectoration.*—It is a fact so well established as to need no argument that the expectoration of consumptives contains the tubercle bacilli, and that these bacilli are the cause of the disease in others. It is also well established that so long as the expectoration is kept moist the tubercle bacilli are not distributed through the air; but so soon as it dries they are liberated and float in the air as fine particles too small to be observed, and that their inhalation with the breath causes the development of the disease in others. So long therefore as consumptives are allowed to spit on the streets the air is liable to contain these germs. So long as they are allowed to spit on the floors of street-cars or other cars, of halls and other public places, there is danger to the public. So long as they are allowed to spit on the floors of hotels or boarding-houses there is danger to the other occupants of these places. Moreover, the danger increases proportionately as the sunlight and fresh air decrease, so that the danger from indoor expectoration is considerably greater than from out-door spitting. It frequently happens that through ignorance, carelessness or feebleness the consumptive spits on bed linen, where the matter dries and becomes a source of danger. How frequent is it the practice to spit in the handkerchief all know. The handkerchief dries quickly, and each time it is used the germ-laden dust infects the atmosphere. The question has been raised as to the relative degree of danger from expectoration in the different stages of the disease. Apparently some have considered the danger slight in the early stages, but great in the later periods where there is cavity formation and profuse expectoration. When it is considered that the earliest diagnostic method recommended to-day is the examination of the expectoration for the tubercle bacilli, and that they are frequently found before the physical examination reveals the presence of the disease, it will be seen that the earliest cases are sources of danger. When it is further considered that the cavity cases with abundant expectoration often show comparatively few tubercle bacilli, but do show immense numbers of the pus organisms, it will be concluded that the variation of danger in the different stages is not so great as at first supposed. An important question conconcerning the expectoration is: Who are liable to be endangered by carelessness in disposing of the sputum? 1. The consumptive himself. It can hardly be doubted that many cases terminate fatally by reason of reinfection with the patient's own expectoration, and that these persons might have recovered had they been more careful in this regard. 2. All persons coming into more or less intimate association with the consumptive. The number of nurses, wives, and others who are constantly associated with consumptives who take the disease is not small. Cornet investigated the death-rate from consumption among certain religious orders devoted to nursing. "In a review of 38 cloisters, embracing the average number of 4028 residents, among 2099 deaths in the course of twenty-five years, 1320 (62.88 per cent.) were from tuberculosis." "The mortality in prisons has been shown by Baer to be four times as great as outside." (Osler.) It is notorious that the insane placed in asylums have a large death-rate from this disease. But in hospitals where due care is taken, as that at Falkenstein, the disease is rarely acquired, and indeed it is claimed that at that institution no nurse or attendant has ever taken the disease. 3. All persons, that is, the public generally, are to some degree endangered by the expectoration on the streets, in cars and other public places. Dr. W. C. Mitchell and the late Dr. H. C. Crouch absolutely demonstrated that the expectoration of consumptives continues to be a source of danger after at least thirty-five hours of exposure to direct sunlight. No one will question, therefore, that the expectoration has abundant opportunity to become thoroughly dry and to be wafted over a large area, thereby endangering, to some degree at least, the health and life of every citizen. 4. Animals are liable to contract the disease from the expectoration of human consumptives. The identity of animal and human tuberculosis, first announced by Koch, but often disputed since, has at last been demonstrated beyond the possibility of a doubt. The reasonableness of the proposition that animals may and do contract the disease from man is not therefore open to question. In a recent summary of Continental opinion on this subject Conn says: "So long as calves come in contact only with their mothers the amount of tuberculosis is very small; the amount of the disease, however, increases rapidly year after year; this increase in the disease is directly proportional to the contact with man. In sanitary institutes, where the attendants of the cattle are presumably in considerable measure suffering from tuberculosis the amount of tuberculosis among the cattle is always very great. There are practically no cases of healthy herds where they are attended by the patients of sanitary institutes. The condition of the herd may be always predicted from the condition of the family that has charge of the herd. If the inspector looks first at the people on the farm and finds one or two of them that appear to have traces of tuberculosis he can predict with absolute certainty that he will find the same disease among the cattle." Of interest in this connection is the fact that it is only in comparatively recent years that the existence of bovine tuberculosis in Colorado has been admitted. Though this is not the sole reason for the development of the disease among Colorado cattle it can hardly be doubted that the constant influx of consumptives to our state and their employment in attending cattle has had considerable influence.

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*Read before the Denver and Arapahoe Medical Society, Dec. 26, 1899.

*Dairy Products.*—That cows suffering from tuberculosis may give milk containing the tubercle bacilli is universally accepted among competent observers. Tubercle bacilli have repeatedly been found in such milk. Animals have been inoculated with the milk and died from typical tuberculosis. Other animals have been fed the milk of tuberculous cows and have succumbed to the disease. Conn says: "It is the universal opinion in Europe, and in this country, of those who have looked into the matter that there is a danger to mankind in the use of tuberculous milk." Hirschberger states that an owner of a herd of cows known to be tuberculous withdrew the milk from market and used it without boiling to fatten his pigs. Almost without exception they became tuberculous and the entire stock had to be killed. Osler says: "There is no reason to believe that young children, or even adults, are less susceptible to the virus than calves or pigs, so that the danger of the disease from this source is real and serious. The great frequency of intestinal and mesenteric tuberculosis in children no doubt finds its explanation here. In Woodhead's analysis of 127 cases of fatal tuberculosis in children, the mesenteric glands were involved in 100." Dr. Martin, on behalf of the Royal Commission of England, experimented with milk from tubercular cows on guinea-pigs, rabbits and pigs. The milk from cows with tuberculosis of the internal organs but not of the udder produced no results. With that from cows with tuberculous udders every inoculation was positive. He then fed 27 animals with varying quantities of milk, and 19 developed tuberculosis. The abdominal organs were chiefly affected in those which developed the disease. Sometimes there was generalized tuberculosis; sometimes the glands about the mouth and the angle of the jaw were affected. When the location of the disease is compared with the location of the disease in children who live largely on milk, the conclusion seems warranted that the infection in both cases is from a common source. In commenting on these experiments Dr. Martin says: "The milk of cows with tuberculosis of the udder possesses a virulence which can only be described as extraordinary. In those cows where the tubercle bacilli were found in the milk, the feeding experiments were uniformly positive, as well as the inoculation experiments. It is noticeable, too, that a small dose of the milk diluted four times gave tuberculosis to all the animals fed, and that a dose of even .05 to .1 c.c. diluted with non-infected milk was sufficient to produce tuberculosis." A boarding-school in Paris had fourteen girls, nine of whom developed tuberculosis in a short time. It was discovered that they had all been using milk from one cow and that that cow was markedly tuberculous. (Conn.) A daughter of Dr. Goss, without hereditary taint or predisposition, was quite healthy up to the age of 17, when she sickened and died in about ten months. The autopsy showed extensive tuberculosis of the abdominal organs and mesenteric glands. Her father had been in the habit of taking her every week to a small farm which he owned, and her chief delight was to drink milk fresh from the cows. Four out of the herd of five cows proved tubercular and two had udder tuberculosis. No other source of infection was discovered. (Kilpatrick). Mayo says, and he speaks from the standpoint of the veterinarian: "As tuberculosis of cattle is identical with that of man, and the disease can be transmitted to mankind through the milk and flesh, which furnish so large a part of the food of man, the importance of this disease is apparent." The entire subject of milk infection was taken up by the Massachusetts Society for the Promotion of Agriculture, the results of the studies of Professor Ernst being published by this society. He found that tubercle bacilli sometimes occur in the milk of cows having no demonstrable tuberculous lesion of the udder. This was determined by cover-glass preparations, as well as by inoculations of animals. Further, it was found that the feeding of infected milk to animals caused the disease in a certain proportion of cases. Ernst came to the following definite conclusions: 1. While the transmission of tuberculosis by milk is probably not the most important means by which the disease is propagated, it is something to be guarded against most carefully. 2. The possibility of milk from tuberculous udders containing the infectious element is undeniable. 3. With the evidence here presented, it is equally undeniable that milk from diseased cows with no appreciable lesion of the udder may, and not infrequently does, contain the bacillus of the disease. 4. Therefore, all such milk should be condemned for food. Bay examined 351 separate specimens of cows' milk by centrifugation, and in 51 found tubercle bacilli.

There are those who assert that the danger to the public health from such sources is so slight as to be of no practical importance. Those making this statement are frequently directly or indirectly connected with dairy work. But if their argument is sound it should be accepted. It may be well, therefore, to examine their chief statements. They assert that unless there be general tuberculosis or udder tuberculosis there is probably no danger. They make the further statement that dairymen will of themselves, without supervision, separate a cow suffering from general tuberculosis from the milk-producing herd. What assurance has the public that this will be done voluntarily? Granting that many dairymen will do it, the public demands, and has a right to demand, that such separation shall not depend on the volition of a dairyman. In view of the fact also that here in Colorado dairymen have had to be forced to separate cows with notorious evidence of tuberculosis, the statement seems too insignificant for further attention. This is not saying, however, that many would not do this; but I do contend that the dairymen as a class could not be depended on to do it. It is also true that there may be widespread bovine tuberculosis without sufficient symptoms to excite suspicion. N. S. Mayo, M.S., D.V.M., says: "It is astonishing how badly an animal may be diseased and to all appearance be in good health. Several years ago I was called to treat a pure-bred Shorthorn cow that, until the day I was called, had appeared in excellent health. The disease was diagnosed as tuberculosis and she was destroyed. Post-mortem examination showed both lungs badly diseased, a tuberculous abscess in one lung containing a pint of pus. Her heart was a mass of tuberculous tissue, weighing 16.5 pounds, and almost every internal organ more or less diseased. This cow had a sucking calf two months old at her side. The calf was destroyed, and was found to have a tuberculous abscess in one lung as large as a walnut, and the bronchial lymphatic glands were also diseased." In view of the difficulty of diagnosis, and in view also of the findings of Professor Ernst, above quoted, and of the further fact that no one can say at what moment a cow suffering from a local tuberculosis may develop a general one or udder tuberculosis, it is certainly an irrational procedure to allow the sale of milk from a cow with a local affection of this nature. It is also worthy of note that the very persons who minimize the danger to human beings from such milk, emphasize the fact that this milk should be Pasteurized or sterilized before feeding it to calves or pigs. One more argument used seems to demand notice: Some assert that during the past forty years bovine tuberculosis has greatly increased, while during the same time human tuberculosis has decreased, and this in spite of the fact that there has been a considerable increase in the use of dairy products. If the truth of these assertions should be granted the conclusion does not follow that there is little or no danger from milk. For far greater attention has been paid during this period to the prevention of infection in other ways than ever before. But Sir Richard Thorne, medical adviser to the Local Government Board, London, said, on Nov. 9, 1898, that the increase of tuberculosis had gone hand in hand with a steady increase in the consumption of cows' milk as a food, English people being habitual consumers of uncooked milk. In Iceland, which is without cows, human tuberculosis is unknown. Japan was free from tuberculosis until cows were introduced from America. Since that time the disease has rapidly developed until now nearly one-third of all deaths are due to this disease.

It is established beyond cavil that milk is a sufficient source of danger to demand the earnest attention of health officials. There appears to be no reason for not accepting without question the doctrine of the danger of milk from tuberculous cows.

*Meat.*—"There has been a large amount of investigation in connection with the possibility and the probability of tuberculosis being carried from animal to man in the flesh of the animal used as food. A very large amount of experiment in this connection has been carried on in the last fifteen years. These experiments have in large degree consisted in feeding tuberculous flesh to animals known to be subject to the disease, and then noticing whether its consumption produces tuberculosis in the animals thus fed. The result of these experiments has been conclusive enough. While it does not always happen that tuberculosis will follow the eating of tuberculous material by such animals, it has resulted in a sufficient number of cases to show beyond peradventure that this disease may be transmitted by the flesh of animals suffering from the disease." (Conn.) It is interesting to note that in New York City, for six years, the average annual death-rate from tuberculosis per 100,000, among the Russian Polish Jews, was but 76.72, while for the remainder of the population it was 427.75. When their scrupulous care as to meat inspection is considered, one can not help wondering if this may not have some effect in producing this wonderful relative freedom from the disease. The almost unanimous opinion concerning the danger from meat is that if there is general tuberculosis the entire carcass is unfit for food. But if the disease be localized the affected part is all that need be condemned. Thorough cooking kills the germ, but so much beef is eaten rare that anything less than the above plan indicates is unsafe.

What evidence is there of bovine tuberculosis in Colorado? It appears to be the general opinion of observers that little, if any, exists among range cattle. This is not strange in view of the continuous out-of-door life which cattle of this class lead. Tuberculosis bears a rather close ratio to the indoor life and forced feeding of cattle. Yet Dr. Hillkowitz and I witnessed the slaughter of a cow from the range, one that had never been outside of Colorado, which had a beginning pulmonary tuberculosis. As to the disease among dairy cows, no one who has investigated the matter will contend that it does not exist. The Denver Bureau of Health has made promiscuous tests, as follows: In 1897, 477 tests, 10 condemned, about 2 1/10 per cent; in 1898, 4 tests, 1 condemned, 25 per cent.; in 1899, 101 tests, 6 condemned, about 6 per cent.; total number of tests 582, total condemned 17; per cent. condemned, about 3. Dr. Hillkowitz, in his interviews with Hebrew slaughterers, found that not one of them would knowingly buy a dairy cow for slaughter because of the known prevalence of tuberculosis among this class. At a certain Denver slaughter-house, notorious for bad cattle, one of the butchers told me he thought 90 per cent. of all dairy cows slaughtered there were tuberculous. No butcher interviewed, and they have been at random, has put the percentage lower than 30. A prominent one who tries to buy the best beeves told me he would not knowingly buy dairy cows, but said that in spite of all care he is compelled to reject a considerable number of carcasses.

There are practically but two methods of determining the presence of tuberculosis among cattle, viz., post-mortem inspection and the tuberculin test. The symptoms are so latent and obscure and the physical signs are so uncertain by reason of the thick chest walls of the animal that the disease may advance extensively before it is suspected. As yet there has been no adequate and systematic slaughter-house inspection in Colorado. The other duties of the city meat inspectors prevent their giving much attention to this matter, so there are no data at hand from which absolutely to determine the per cent. of tuberculous animals coming to slaughter. The State Board of Health has tried to obtain the estimate of the butchers without bias, and this opinion is recorded above. Everyone knows that no adequate testing with tuberculin has been made, but the available statistics are quoted above. To hazard a statement of the amount of bovine tuberculosis in Colorado would therefore be unwise. But it can be asserted with positiveness that the disease exists. It is also probably true that a complete testing of all dairy cows within the state would reveal a larger prevalence than has been supposed. Certainly it is true that unless measures are taken to lessen its spread the percentage will increase rather than otherwise.

This introduces an idea which has not received sufficient consideration, but which, nevertheless, is exceedingly important, i. e., that the prevention of bovine tuberculosis is of marked importance to the dairymen and stockmen themselves. Tuberculosis enters a herd in the first instance from without, by one of the methods above mentioned. Once it has entered, its spread is certain under ordinary conditions. This means a prospective loss of a percentage at least of the stock and the continual infection of fresh animals. Instances are recorded where owners have been forced to entirely restock their farms because of the continual spread of the disease. Conn says: "The statistics being collected in the last few years are tending to show that bovine tuberculosis is not only on the increase but on the very rapid increase. Twenty-five years ago the amount of tuberculosis reported from slaughter-house inspection was only 3 to 5 per cent. To-day it is 10 to 50 per cent., and more often approaching the higher than the lower figures."

In Germany, in 1895, there was a direct loss to the farmers of $1,500,000 from the condemnation of carcasses of slaughtered cattle alone. It should be remembered, too, that German inspection does not condemn every tuberculous carcass, so that this represents but a small part of the money value of the tuberculous animals. Though it is probably true that our percentage is lower, the danger is present, and it is far more economical to attack the problem now than it will be if a few years are allowed to pass in inaction. Therefore, the dairymen and all breeders of stock should welcome rather than oppose a practical move in this direction.

How can the milk supply be protected? Not by examining the milk for the tubercle bacilli, because milk from a tuberculous udder may be free to-day and full of bacilli to-morrow, and to analyze every milking is a physical impossibility. Not by mere inspection of the herd. Though this would reject the majority of animals with advanced general tuberculosis and those with pronounced udder disease; there are real dangers, according to the statements of competent authorities—e. g., Mayo and Ernst—from animals in which the disease can not be discovered by even close inspection. There remains but one known method, the use of the tuberculin test and the prohibition of the sale of milk from every animal not shown free from reaction. The simplicity of the test makes it easy of application. Its absolute freedom from danger is now acknowledged. Its accuracy may be understood from the following figures given by Mayo: Out of 11,313 cattle tested, 5,737 reacted. On post-mortem, 5,746 were found tubercular. Two reacted that did not show tuberculosis and 9 did not react, but were tuberculous. This shows an average of but one error in every 1,028 tests.

This testing should be done by officials only, in order to be sure of its accuracy and to guard against fraudulent certificates. The method is simple, but takes time. The tester takes the temperature of the animals every two hours, from 6 a. m. to 8 p. m., and records this as a basis for comparison. At 10 p. m. he injects 2 c.c. of tuberculin (B. A. I.) hypodermically. Beginning at 6 a. m. of the following day he records the two-hourly temperature until 10 p. m. If the temperature rises 2 F. or more above the corresponding temperature of the day before, the animal is considered tuberculous.

What shall be done when tuberculosis is discovered in a herd? 1. The reacting animals should be separated absolutely from the non-reacting, without delay, and there should thereafter be absolutely no communication of the herds, as by using the same feeding places, watering troughs, etc. The reacting animals should be marked with an imperishable mark or brand. 2. The barn which they have occupied should be completely disinfected. 3. The sale of milk from the reacting herd should be stopped at once. 4. It is not necessary to order the slaughter of every reacting animal. If a man has but one or two reacting animals he will probably prefer to kill them. But even then he need not suffer great financial loss. For unless there is general tuberculosis he should be allowed to fatten the animal for beef, if he will consent to slaughter under competent inspection. But if he has a considerable number of reacting animals he probably will wish for some other solution of the problem. If he can and will absolutely separate and keep separate the two herds, and if he will separate the calves of the reacting herd, have them tested and bring them up on non-infected milk, there is no reason why he should not be allowed to use these diseased animals to build up a healthy herd. But this latter plan depends for its success on rigid observance of the conditions mentioned.

The two greatest hindrances to the solution of this problem have been the objection, on the part of the owners, to the financial loss involved in compelling the slaughter of their animals without compensation, and that on the part of the state to the enormous burden involved in compensation. With these two objections removed there should be active, earnest co-operation of all concerned. I believe the two plans presented do away with the objections, for the farmer will be able to sell many diseased animals, getting good compensation therefor, and where his herd has become largely invaded he can, by proper care, build up a healthy one and be assisted in doing so. He must lose only those animals which would soon die. On the other hand, the state does not need to spend a great amount of money for condemned animals. I am thoroughly convinced that it will pay the owners to take up this problem and pay the necessary expenses of testing if some competent authority will guarantee the accuracy of the work. But it is doubtful if they will without some encouragement.

The question now confronting us is: What shall we do to lessen the spread of this disease among animals and mankind?

1. The continual education of the public is essential to success. Every person should be informed as to preventive measures. I therefore recommend that a carefully worded circular suitable for popular distribution be prepared by the State Board of Health, and that an effort be made through local health officers, physicians, libraries and schools to put this circular in the hands of every resident of Colorado. This circular should set forth the dangers from expectoration and from milk and meat supply, and the measures necessary to prevent the danger.

2. Public expectoration should be lessened by proper placards and be prohibited by ordinances in the larger places of the state. Women's clubs, city improvement societies and the public press will be of great aid and I recommend that their active co-operation be secured where possible.

3. I recommend that all rooms where deaths from consumption are reported be disinfected immediately by the local health officers.

4. All insane asylums, prisons, reformatories and hospitals should be required to keep tubercular and non-tubercular inmates separate. For state institutions this is the work of the State Board of Health; for others it is the work of local boards of health.

5. So far as possible dairymen should be persuaded to have their herds tested and use this as a means of advertising. But as this is insufficient, I recommend that by the promulgation of health regulations or by the passage of ordinances where necessary, dairymen be compelled to produce official certificates of freedom from tuberculosis before they are granted permits to sell milk. Due notice must be given, but this ordinance can go into effect by July 1, 1900, if the matter is properly pushed, and I recommend that date. Where necessary it will be well to compel the payment of a certain sum per head for every cow in the milk-producing herd, and to utilize this fund for testing and sanitary supervision. The State Board of Health is willing to select competent men for this work on request of local officers, and to frame and publish rules governing such testing and inspection; in short, to facilitate the work in every way. It seems to me desirable to have an agreement between the local boards and the State Board of Health, so that no inspector will be employed without authority from the latter. Uniformity of regulations and complete records of the work can thus be secured, and no confusion as to conflict of authority can arise.

6. I also recommend that the employment of tubercular persons on dairy farms or at milk depots be absolutely prohibited, by ordinance.

7. Ordinances should be passed prohibiting private slaughter-houses and requiring that all animals be slaughtered at public abattoirs under competent inspection. If federal meat inspection can be secured, all condemned meat should be destroyed in order to prevent its being placed on the local markets. If federal inspection can not be secured, a tax should be levied on the slaughter business sufficient to meet the expenses of inspection.

8. I further recommend that the active aid of the public press be enlisted in furthering all phases of this important work.

These measures were definitely agreed on at a conference of state and local officials held on Dec. 23, 1899, and will be carried out by the responsible officers.

## REGULATION OF THE PRACTICE OF MEDICINE.*

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The power and the duty of the states to regulate the practice of medicine have been fully established. It is the inalienable right and imperative duty of the government, by legislation, to promote the health, morals, education and good order of the people. This right, vested in the people in their sovereign capacity, has been likened to the individual right of self-defense, the exercise of which is a part of the law of self-preservation. The police is a plenary power, and may be exercised by the state to regulate or prohibit things inconsistent with the public welfare.

No other function of government has been so frequently appealed to, nor so successfully exercised, and none other is of greater importance to the people, individually and collectively. We look to this power for the suppression and punishment of crime, the preservation of public peace, the regulation of dangerous employments, the sale and use of dangerous commodities, the prohibition of acts inconsistent with public morals, the protection of the weak from the aggression of the strong, the ignorant and unwary from the power of the cunning and the unscrupulous, and for the maintenance of the public health.

It is by virtue of this power that the state maintains prisons, confines lunatics, regulates the conduct of vagrants, establishes fire limits, regulates the use of dangerous machinery and public conveyances, forbids lotteries and gambling, prescribes quarantine regulations, prohibits adulteration of foods, controls the liquor traffic; in short, it is the weapon to battle with all of the evils of society.

It is under this classification that the state regulates trades, occupations and professions, notably those of plumbers, engineers, pilots, masters of ships, telegraph operators, druggists pharmacists, lawyers and physicians.

Some physicians question the propriety of such legislation. It is urged that the ignorant are inclined to look on such legislation as an attempt by the physicians in practice, to monopolize the business, and that under defective or poorly-executed laws the dishonest and incompetent succeed in getting certificates to practice, and their pretensions are made respectable thereby. My judgment is that the united efforts of the profession could not effect a repeal of the legislation on this subject. The necessity for such legislation is firmly fixed in the minds of most intelligent laymen, as the legislation on the subject in nearly every state in the Union from the earliest period to the present time shows. It would seem to be your duty to the public to assist in formulating such legislation and in making the same effective. The man of science can hardly afford to shrink from public duty because its discharge is unpleasant, nor because some of the beneficiaries are incapable of appreciating the protection afforded by his efforts. The self-consciousness of public duty well performed, and the approbation of posterity, are the only certain rewards of the faithful and efficient public servant.

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*Delivered before the Polk County Medical Society, Oct. 2, 1899.

Public welfare demands that the physician and surgeon possess knowledge and integrity; knowledge to properly diagnose the case and to apply appropriate remedies, and the integrity to deal honestly with his patients. It is certainly unnecessary to demonstrate that a well-disciplined mind, thoroughly familiar with the several branches that compose the science of medicine, is essential to the diagnosis of a case, and that such diagnosis should precede treatment; and it is equally patent that the physician's or surgeon's skill and honesty are unknown to the people, if he be inexperienced or in a strange community. The purpose of legislation on this subject is to furnish to the people proof of these essential qualifications, by requiring appropriate certificates from duly constituted state authorities, and that such certificates be made accessible to all by being recorded in a public office of the county.

Legislation regulating the practice of medicine is common to all of the states, and its constitutionality, when framed on proper lines, has been universally sustained. The exercise of the police power, especially in the regulation of occupations, trades and professions, has been persistently resisted as an encroachment on personal liberty. Our first conception is that every man has the right to follow any occupation, trade or profession he may desire, without let or hindrance from the state, and that to earn an honest living in any place and in any legitimate calling, without restriction, is an inalienable right. That this reasoning is fallacious and ignores one of the fundamentals of government is made plain by the following recent deliverance by the Supreme Court of the United States:

> It is undoubtedly the right of every citizen of the United States to follow any lawful calling, business or profession he may choose, subject only to such restrictions as are imposed upon all persons of like age, sex and condition. This right may in many respects be considered as the distinguishing feature of our republican institutions. Here all vocations are open to every one on like conditions. All may be pursued as sources of livelihood, some requiring years of study and great learning for their successful prosecution. The interest, or, as it is sometimes termed, the "estate" acquired in them—that is, the right to continue their prosecution—is often of great value to the possessors and can not be arbitrarily taken from them, any more than their real or personal property can be thus taken. But there is no arbitrary deprivation of such right where its exercise is not permitted because of a failure to comply with conditions imposed by the state for the protection of society. The power of the state to provide for the general welfare of its people authorizes it to prescribe all such regulations as in its judgment will secure, or tend to secure, them against the consequences of ignorance and incapacity, as well as of deception and fraud. As one means to this end, it has been the practice of different states, from time immemorial, to exact in many pursuits a certain degree of skill and learning upon which the community may confidently rely; their possession being generally ascertained upon an examination of the parties by competent persons, or inferred from a certificate to them in the form of a diploma or license from an institution established for instruction on the subjects, scientific and otherwise, with which such pursuits have to deal. The nature and extent of the qualification required must depend primarily upon the judgment of the state as to their necessity. If they are appropriate to the calling or profession, and attainable by reasonable study or application, no objection to their validity can be raised because of their stringency or difficulty. It is only when they have no relation to such calling or profession, or are unattainable by such reasonable study and application, that they can operate to deprive one of his right to pursue a lawful vocation.

The present Iowa medical practice act, which supersedes all previous legislation on the subject was passed in 1897, and provides that the Board of Medical Examiners may issue certificates to physicians, authorizing them to practice medicine, surgery and obstetrics in the state, as follows:

1. Persons who began the practice of medicine in the state before Jan. 1, 1899, and have passed the examination prescribed by the act.
2. Persons who began the practice of medicine in the state before Jan. 1, 1899, and who had diplomas from medical schools in good standing, issued before said date.
3. Persons who begin the practice of medicine after Jan. 1, 1899, have diplomas from medical schools in good standing, have passed the required examinations before the Board and have furnished evidence that the applicant has attended four full courses of study of not less than twenty-six weeks each, no two of which shall have been given in any one year.
4. A person who goes from place to place and solicits persons to meet him for professional treatment at places other than his office at the place of his residence, is an itinerant physician, and in addition to procuring a certificate from the Board, as other physicians are required to do, must also pay $250 per annum for the use of the state.

Each applicant for a certificate must pay a fee of $20. The certificate must be recorded in the office of the county recorder, who receives a fee of 50 cents for recording. The Board may refuse to grant a certificate to a person who is not of good moral character, and if granted it may be revoked for a like cause, or for incompetency or habitual intoxication, or for false and fraudulent statements as to graduation.

The following persons are not required to have certificates:

1. Physicians who have been in the practice in this state for five consecutive years, three years of which time shall have been in one locality.
2. Students of medicine, surgery or obstetrics, who have had not less than two courses of lectures in a medical school of good standing, may prescribe under the supervision of a preceptor, or render gratuitous service in case of emergency.
3. Surgeons of the United States Army, Navy and Marine-Hospital Service.
4. Physicians or midwives, who have obtained from the Board of Examiners a certificate permitting them to practice medicine, surgery or obstetrics, without a diploma from a medical school or examination by the Board.
5. Persons who advertise, sell or prescribe natural mineral waters flowing from wells or springs.
6. Registered pharmacists filling prescriptions.
7. Persons selling patent or proprietary medicines.

In 1898 an act was passed authorizing the Board of Medical Examiners to issue certificates to graduates of osteopathic schools, authorizing them to practice osteopathy, at the same time declaring the same not to be the practice of medicine.

One of the district judges of the state, in a well-written and what seems to be a well-considered opinion, has held the act of 1897 unconstitutional, because of the provision which exempts from the operation of the act "physicians . . . who have been in the practice in the state for five consecutive years, three years of which time shall have been in one locality."

The point made against the law is that it is class legislation, or, as the judge says:

> The act divides medical practitioners into two classes, those who have practiced five years in the state, three of which shall have been in one locality, and those who have not so practiced. On the latter class a burden of an examination, a fee of $20, the recording of their certificate and the payment of a fee of fifty cents is imposed, and must first be complied with before they can lawfully practice medicine after the taking effect of the law, no matter what may have been their ability, skill or qualifications. When the law took effect the five-years-man

with three years in one locality was not in any way affected thereby.

The state and federal constitutions invoked in this case do not contemplate that every man shall have the same rights, immunities and privileges as every other man; but they do mean that every man shall have the same rights, immunities and privileges as every other in the same situation.

Some years ago the legislature of this state passed a bill regulating railroad freight rates, and in a decision sustaining such legislation the Supreme Court of the United States said:

> It remains only to be considered whether the statute is in conflict with Section 4, Article 1, of the Constitution of Iowa, which provides that "All laws of a general nature shall have a uniform operation" and that "the General Assembly shall not grant to any citizen, or class of citizens, privileges or immunities which upon the same terms shall not equally belong to all citizens."
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> The statute divides the railroads of the state into classes according to business, and establishes a *maximum* of rates for each of the classes. It operates uniformly on each class, and this is all the constitution requires. The Supreme Court of the State in the case of McAunich vs. R. R. Co., 30 Iowa, 343, in speaking of legislation as to classes, said: "These laws are general and uniform, not because they operate upon every person in the state, for they do not; but because every person who is brought within the relation and circumstances provided for is affected by the law. They are general and uniform in their operation upon all persons in the like situation, and the fact of their being general and uniform is not affected by the number of persons within the scope of their operation." This act does not grant to any railroad company privileges or immunities, which upon the same terms do not equally belong to each other railroad company. Whenever a company comes into any class it has all the privileges and immunities that have been granted by the state to another company in that class. It is very clear that uniform rate of charge for all railroad companies in the state might operate unjustly upon some.
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> It was proper, therefore, to provide in some way for an adaptation of the rates to the circumstances of the different roads; and the General Assembly, in the exercise of its legislative discretion, has seen fit to do this by a system of classification. Whether this was the best that could have been done is not for us to decide. Our province is only to determine whether it could be done at all, and under any circumstances. If it could, the legislature must decide for itself, subject to no control from us, whether the common good requires that it should be done.

Physicians who hold diplomas from medical schools of good repute, those who do not, and those who have been in the practice a given length of time are arranged in classes in the medical practice acts of most of the states, and such classification has been sustained by the supreme courts of Oregon, Minnesota, Michigan, Indiana, North Carolina, Nevada, and Washington Territory, and the Supreme Court of the United States, and the right to make the same may be regarded as established.

The decision in question seems to be based on two New Hampshire cases, and in these the following is the turning point, as stated by the court:

> The present objection is not to the rule of evidence by which the statute requires qualification to practice to be determined. It is not that residence and practice during the specified time in one place is made sufficient evidence of fitness, equivalent to a diploma, rendering an examination unnecessary. It is not that, of those physicians who are declared by the statute or under its provisions are found qualified to practice, some are, and others are not subject to the burden of obtaining a license. Exemption from the burden is made to depend, not upon the integrity, education and medical skill, but upon a continuous dwelling in one place for a certain time. It is an arbitrary discrimination, permitting some and forbidding others to carry on their business, without regard to their competency or to any material difference in their situation. The test is not merit but unchanged residence.

After stating the above views in his own language, the judge of this state, whose opinion we are considering says:

> I think our law makes an arbitrary discrimination, laying a charge or burden on one class of physicians and citizens of the state not imposed upon others, in permitting some and forbidding others to carry on the business without regard to their competency or skill.

The constitutionality of these statutes turns on the question whether the classification of physicians made by this act is a legal and proper one. If physicians who hold diplomas are properly put into one class, those without diplomas in another, and those who have been in the practice in a particular place for a specified time in still a third class, then it follows that a person in either class has no right to complain of the requirements as to the class to which he does not belong. The man without a diploma, who must pay $20, can not complain, for all of his class pay likewise; neither can he complain because the practicing physician is not examined and pays nothing, for the obvious reason that he does not belong to that class.

Then, the real objection is that the classification is based on the residence of the physician at a particular place for a given length of time, and that such classification is an arbitrary one, i. e., one that has no relation to the proper regulation of the practice of medicine.

In each decision the court has assumed that the classification is an arbitrary one. If this is a correct assumption the courts have arrived at correct conclusions. The United States Supreme Court has well said:

> When we consider the nature and the theory of our institutions of government, the principles upon which they are supposed to rest, and review the history of their development, we are constrained to conclude they do not mean to leave room for the play and action of purely personal and arbitrary power.

The fallacy in these decisions is in the assumption that this is an arbitrary classification. I concede, if the act should provide that all red-headed physicians shall be exempt from the duty of getting a certificate, the classification would be an arbitrary one and could not be sustained. The classification must have some relation to the subject classified and to the purpose of the legislation. The existence of that relation is a judicial question, but its importance, it once having been found to exist, is one solely for the legislature to consider.

This legislation is for the purpose of protecting the people from ignorance, incompetency and dishonest practices. A stranger or student coming into a community to practice medicine must file with the recorder of deeds evidence of the fact that he has satisfied the officers of the state that he is worthy of confidence, and qualified to practice medicine. In no other way could the public so readily ascertain these facts or obtain this protection. This reasoning does not apply to a physician who has practiced five years in the state and three years in a particular place. A physician is a conspicuous figure in every community. In a sense he is a public character. Everyone soon knows him by name, sight or reputation. At the end of the required statutory time the people of the community have fixed ideas of his integrity, capacity, and of whether he is a success or a failure. He who does not know can soon learn from his neighbor. Nearly every citizen is capable and willing to express an opinion. The man who could be imposed upon under such circumstances would need a guardian. A certificate filed at the court-house would not answer the purpose. Now why should such physician be classed with the student or stranger? Is not place of residence very properly made the turning-point in the classification? How can the courts say, as a matter of law, that such classification has no relation to the subject classified and to the purposes of the legislation?

In passing on a case involving this principle, the Supreme Court of North Carolina said:

> It was fair to assume that those already in the practice, many of whom had grown gray in the service of humanity and the alleviation of suffering, had already received that public approbation which was a sufficient guaranty of their competency, and should not be needlessly subjected to the humiliation of an examination by the side of beardless boys, who had not yet swung a scalpel or prescribed a purgative, save under supervision; while those already in the practice who had proved incompetent it might be assumed, had been equally stamped with public disapproval, at the cost to the public of much bitter experience.

As supplementing what has already been said, I quote with approval a recent declaration by the Supreme Court of Michigan:

> The real test of the right to practice is that he shall be a graduate of any legally authorized medical college in this state or in any one of the United States, or in any other country, and in this there is no discrimination. Now the legislature saw fit, in establishing this test, to except from its provisions a certain class of physicians and surgeons. In so doing, it in effect declared that the physicians or surgeons who had actually practiced medicine continuously for at least five years in this state, and who are practicing when this act shall take effect, were as well qualified, in its judgment, to continue the practice of their profession as the student coming fresh from the halls of a college with his diploma was to commence it. The reasons which induced the legislature to insert the exception may have been as varied as the different minds of its members. It certainly had power to insert it, and whether the power was reasonably or unreasonably exercised, or whether it was expedient to enact the law, are questions exclusively within the province of the legislative branch of the state government, and their judgment must necessarily be decisive upon these questions.

It is apparent to me that this classification is not an arbitrary one, but that it was necessary and proper for the legislature to recognize the existence of conditions which called for a classification of the subject for the purposes of appropriate legislation, and that the details of that classification are only for legislative consideration.

It will be observed that physicians and midwives who have obtained from the Board of Examiners certificates permitting them to practice medicine, surgery or obstetrics, without a diploma from a medical school or examination by the Board, are exempted from the operation of the act.

The physicians referred to can not be those who have practiced five years, three years of which time in one locality, for they are exempted by another clause. This exemption is made, it seems to me, through a misconception of previously existing law. The act of 1888, in force when the act of 1897 was passed, provided for the issuance of certificates to graduates of medical schools in good standing and to persons passing the required examination, and also to physicians who had practiced in the state five years, three of which at one place. No authority existed in the Board to issue certificates to physicians or midwives who belonged to neither of the three classes named. The result is that the legislature has created a class of physicians and midwives, to-wit, those holding certificates from the Board at the time of the passage of the act of 1897, which had no existence in fact or in law, for the Board had no authority to issue such certificates. The presumption is that none were issued and that no such class existed.

It may be urged that the language of the act making the exemption is sufficient authority for the Board to issue such certificates. If such a conclusion is sound it would probably be fatal to the validity of the act, for it would confer on the Board arbitrary power to issue such certificates according to the caprice of its members. Such position, however, is not tenable. The whole act bears evidence of the intention of the legislature to require the Board to act on evidence, the *quantum* of proof in each case being defined by the act. Such a construction would invalidate the act. It is a well-established rule that when a statute is susceptible of two constructions, one of which would make it unconstitutional, the one that sustains the statue will be given. As no one belongs to this class, and no one legally can belong to it, there can be no such thing as rights, privileges or immunities thereunder, and therefore there can be no discrimination in favor of any one by reason of such classification.

Each itinerant physician is required to pay to the state $250 per annum, and it may be urged that as the payment has no relation to the existence or non-existence of skill in the science of medicine, it is an arbitrary exaction from a class of physicians. But we have already seen that the legislature has made prominent in the act the importance of permanence in location of the physician as an element of safety to the public; evidently on the theory that when a reputation for good or bad is established the people can protect themselves, and that such idea properly arises out of the subject of the practice of medicine. It seems to be the judgment of the legislature that quackery, fraud and deception can best be practiced amongst strangers, and is most likely to be resorted to by itinerant physicians. This I believe to be also in accord with the common judgment of mankind. The legislature might legally, if it saw fit, entirely prohibit the itinerancy of physicians on this theory. This legislation is designed simply to discourage the practice, and is a reasonable exercise of legislative power.

In the act of 1897 there is a discrimination between those who may begin the practice and receive their diplomas after Jan. 1, 1899, and those who began the practice and received their diplomas before that date. The latter class can receive certificates on presenting their diplomas without examinations, or on examinations without diplomas, as provided by the old law, while the former class must have diplomas, pass the examinations and furnish evidence of having attended four full courses of study of not less than twenty weeks each, no two of which shall have been given in any one year.

The classification is based on a date, named in the act, two years subsequent to the passage of the statute. Is this classification arbitrary and illegal, or one appropriate for the subject classified and within legislative power?

The primary thought in this classification is the recognition of progression in the legislation on this subject, and the existence of rights accrued under the old law which should be respected. It is no small undertaking for the average man to qualify himself for the practice of medicine. The statute in force prior to the passage of the act in question was enacted in 1888. It is but reasonable to presume that the curricula of the medical collges of the state were arranged, and that students had adjusted their courses of study so as to comply with the existing law. This much the state had a right to expect. It is probable that at the time of the passage of this act students were in all stages of preparation for the practice of medicine, some studying with physicians as preceptors, others attending medical colleges, none of them meeting the requirements of the new, but all of them complying with the requirements of the old, law. By naming a date two years in the future, the new student of medicine could adjust his course of study so as to comply with the law when it should go into effect, and the old student could comply with the provisions of the old law, for the compliance with which he had been educated. It would seem that such a classification is not only based on existing conditions but is manifestly just, fair and right. The validity of such legislation has frequently received judicial sanction, and no condemnation, so far as I have been able to find.

The other objections that might be made to the act are fully covered by what has already been said, and will not be further considered.

### OSTEOPATHY.

The validity of the amendment of 1898, respecting osteopathy, is the only remaining proposition to be considered. It is provided in that act that:

> Any person holding a diploma from a legally and regularly conducted school of osteopathy of good repute as such, and wherein the course of study comprises a term of at least twenty months, or four terms of five months each, in actual attendance at such school, and shall include instructions in the following branches, to-wit: anatomy, physiology, chemistry, histology, pathology, gynecology, obstetrics and theory and practice of osteopathy, shall, on the presentation of such diploma to the State Board of Medical Examiners and satisfying such Board that they are the legal holders thereof, be granted by such Board a certificate permitting such person to practice osteopathy in the State of Iowa, upon payment to said Board of a fee of $20, which certificate shall be recorded by the county clerk of the county in which the holder desires to practice, for which he shall receive a fee of one dollar.

It is further declared that the practice of osteopathy is not the practice of medicine within the meaning of the act just considered.

All such statutes depend for their efficiency on the penalty attached for the violation thereof and its exaction by public authority. In vain may the legislature define crimes and entreat the people to be good, unless penalties are attached to enforce observance. Fine and imprisonment are imposed for a violation of the act of 1897; but the act of 1898, for some reason, provides that the provisions of the act of 1897 shall not apply to the practice of osteopathy, and at the same time provides no punishment for one practicing osteopathy without the proper certificate.

There is, however, a provision in the Code of Criminal Procedure, which provides that "when the performance of any act is prohibited by any statute, and no penalty for the violation of such statute is imposed, the doing of such act is a misdemeanor." This act of 1898 does not in terms prohibit the practice of osteopathy without a certificate, and there is some question whether such prohibition can be implied from the language used so as to make the doing of such act a crime; but for the purposes of this paper we will assume that said section is applicable and supplies what would otherwise be a fatal defect, in the act under consideration.

We are now led to inquire: What act is prohibited? What is it that constitutes the offense? For what may a defendant be convicted? The statute says the practice of osteopathy without a certificate; but what is practicing osteopathy? What does the word "osteopathy" mean? I have examined the latest dictionaries, but find no trace of the word; works of science, but they are silent as the grave; the common law, but there no such word to designate an offense is known. Turning to the August number of the *Cosmopolitan Osteopath* we are informed that "a period of five short years embraces practically all of the history of osteopathy," and that "the name is derived from *osteon*, bone, and *pathos*, suffering." Neither the word osteopathy nor those from which it is derived throw the least light on the meaning of the statute. If any meaning at all is to be attached, it would probably be that the practice of osteopathy is the practice of bone suffering, which would hardly answer for the definition of a crime.

The word osteopath has neither a scientific nor a popular meaning. Probably most people know that it is the name of a new school of medicine, but of what the treatment consists there does not seem to be a popular conception. Thinking that my own information on the subject might not be a proper test of the popular standard, I inquired of twenty persons, lawyers, merchants, mechanics and day laborers, representative men of their respective occupations, and not one of that number was able to convey a definite conception of the mode of treatment. All understood the name to designate a new school of medicine, some thought drugs were not administered in the treatment of disease, but where to draw the line, or whether a line could be drawn, between such method of treatment and hydropathy, electrotherapeutics, suggestive therapeutics, massage, divine healing, faith healing, "Christian Science," oxydonor, oxygener, the various other methods of treatment, including the methods of the regular practitioner when drugs are not administered, no one was able to say.

By the act of 1897 it is provided that any person is practicing medicine "who shall publicly profess to cure or heal," but the act we are considering expressly declares that the practice of osteopathy is not the practice of medicine within the meaning of the former act. What was meant by the use of the former act. What was meant by the use of the word osteopathy after this legislative declaration can only be suspicioned, and I fancy that this legislative conception is as confusing to the osteopathic practitioner as it is to me.

The making of an act a crime is a legislative function. The act constituting the crime must be defined. In the trial of a criminal cause it becomes the judge's duty to define the crime as a matter of law, and it is for the jury to determine whether the defendant committed the act said by the court to constitute the crime. In the absence of a definition by the legislature, probably no two judges would agree as to what the legislature meant by osteopathy. The defendant's guilt would be determined by the surmise of the judge. In one court the defendant might be held guilty, and in another innocent, on the same state of facts.

A recent decision by the Supreme Court of Louisiana is in point:

> All crimes in Louisiana are statutory, and there can be no crime which is not defined and denounced by statute. The determination and definition of acts which are punishable as crimes are purely legislative functions, which can not be delegated to or exercised by the judiciary. This statute denounces as a crime, on the part of civil officers, "any misdemeanor in the execution of their respective offices." It does not on its face undertake to define, in any manner what acts are misdemeanors in office, and, unless there is some other law which furnishes such definition, there is no other source to which we can look for it except to the discretion of the judiciary, which, in each case brought before it, will be vested with determining

whether or not the particular acts charged, ranging from the most trivial to the most serious derelictions, from the malicious infractions of duty to the most innocent errors of judgment, shall or shall not be punished as a crime. This would operate a delegation to the judiciary of power purely legislative, in flagrant violation of the constitution.

Our own supreme court has declared that "Criminal statutes are inelastic and can not by construction be made to embrace cases plainly without the letter, though within the reason and policy, of the law." Clearly, no act of any character whatever is within the letter of this statute, and it can not be enlarged by the evident purpose of the legislation. In my judgment the act of 1897 is valid, and that of 1898 is uncertain, and for that reason the courts, in all probability, would hold it void.

# MEDICINE AS A BUSINESS PROPOSITION.*

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CHICAGO.

*(Concluded from p. 1321.)*

## READY-MADE DOCTORS AND PROPRIETARY MEDICINE FAKES.

The prosperity of the medical profession is being slowly, but surely, sapped by the manufacturers of quasi-patent medicines and secret preparations. The patent medicine fiend has appeared in a new guise. He now masquerades as a corporation for the manufacture of specifics and panaceas for the relief of ills that must have forever remained uncured were it not for his tender ministrations—his occult knowledge of chemistry, and superior pharmaceutic skill. The good old road to fortune via the patent medicine route is largely obstructed by others playing the game. The fakir, nothing daunted, has secured as cat's paws to pull his chestnuts out of the fire, reputable though foolish physicians. There is a peculiar trend in human nature in the direction of "cure-alls"—remedies that fit all diseases, work speedy cures and afford a royal road to recovery. This same peculiar mental bias exists in doctors. It is refined by education and experience, to be sure, but the doctor has it, and "has it bad," and Mephisto Proprietarius knows it. The doctor's experience often breeds a lack of confidence in his remedies, and his materia medica narrows year by year. Yet his patients clamor for relief, and in despair the doctor receives, with open arms, the fakir who agrees to furnish him with speedy cures.

Behold the result. The pharmacopeia is fast drifting into the valley of dead lumber. It is no longer necessary to know anything of materia medica and therapeutics—the fakir attends to all that for us. We are no longer offended by the gratuitous insult offered us by the proprietary medicine fiend, who knocks at our door and, with the implied insinuation that he furnishes brains for the medical profession, clutters our office tables up with samples, the labels on which tell us all about diseases and the only preparations that will cure them. Pah! How most of them smell! And what a nuisance they are.

But the fakir has done his work well. He has evolved the ready-made doctor—man of all work, aye, slave to the fakir. How gently flows the current of Doctor Readymade's professional life. No more incurable cases. No more midnight oil—for why should he be a slave of the lamp? No more worry. No more care. No more expenditures for books, journals and instruments. All the doctor has to do now-a-days is to read the labels on the bottles and boxes of samples the fakir brings him. Does the patient complain of stomach disturbance? He is given "Stomachine." Are his kidneys working overtime? "Kidneyol" is the proper caper. Is there a pain lurking somewhere in his economy? Give him one of these pretty little tablets with a hieroglyph on it, which nobody knows the composition of—so the firm that makes them claims. Oh, the practice of medicine is so easy now-a-days. Ready-made diagnosis and treatment—what could be simpler?

The proprietary medicine fakir begins his little song by assuring the physician that his wonderful preparation is for the use of the profession only. He is trying to introduce it "along strictly ethical lines." He has given the preparation a fanciful name and marked it with a special design "for the protection of the physician, who, of course, wants to know *that his patient gets just what is ordered*." What an imbecile the doctor is. The chief objects of the special name and hieroglyphic design are: 1, to induce the physician to order the preparation frequently, the name being catchy and easy to remember; 2, to let the patient know what is ordered, so that he can prescribe it for himself and friends without the aid of a doctor. Having popularized the preparation in this manner, the proprietary medicine man often advertises his wares directly to the public via the secular press. If the profession protests, the wily medicine man says: "Well, you endorsed it; the profession uses it; hence it is a good preparation and a benefit to humanity. Go to, you are bigoted and narrow-minded."

Now, my brethren, while the foregoing remarks are fresh in your minds, try and recall the facts regarding "Scott's Emulsion," and the "Midy Capsule."

Not all proprietary medicine men take the newspaper route—they don't have to. The cat's paw doctor does his work too well. Witness the "little joker" antipain tablet already mentioned. Probably ten times as much of this preparation is self-prescribed as is prescribed by physicians. It unquestionably contains drugs that should be taken only under medical advice, and yet physicians prescribe it in a manner which leads directly to self-prescribing by the laity. Is it possible that the Pharmacopeia offers no agent of equal or better merit? Has the manufacturer more wisdom than all the ages past—to say nothing of the present age of progress? Or is this an age of medical progress, anyway?

I herewith submit the proposition that the medical cat's paw is pulling the proprietary monkey's chestnuts out of the fire, every time he prescribes a proprietary article "protected" by special design and under a term that he who runs may read. The fakir laughs in his sleeve at the profession, and small wonder. It has come to pass that he owns us, and when his impudent agent demands a hearing at our offices, we are tacitly given to understand that our time is his by right. Perhaps it is, by right of conquest, for the medical profession seems to be thoroughly subjugated. The distributor of drug samples is always working in the business interests of his firm and himself. How would it do to insist on payment for our time from the agents of some of our irresponsible, mushroom fake-medicine factories?

There is another side to the picture. Drug manufacturers—even some of those engaged in the manufacture of quasi-proprietary medicines—have done much for pharmaceutic elegance and convenience. Many of our manufacturers are conscientiously proceeding along ethical lines. We are glad to welcome their representatives and their preparations. But, unfortunately, such manufacturers are a small minority. The physician should be reful how he prescribes the preparations of even le firms. Preparations with special and striking s should be prescribed under formula, where possi- nd always in such a manner that the patient can no rescribe the preparation for himself offhand.

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*Lecture delivered at the public meeting of the St Joseph County Medical Society, South Bend, Ind., Jan. 30, 1900.

have much for which to thank some of our manu- ers, in the way of elegant and reliable preparations or to whom honor is due. We should none the owever, guard our own interests. The manu- ers can not always do so and sometimes will not. There is no objection to secret methods of preparation of medicine so long as the formula is known. The physician should know what he is prescribing. It is an insult to offer him any other class of preparations. When prescribing, I repeat, he should prescribe under a term comprehending the formula of the drug, or under his own cipher. Where the nature of the preparation is such that he can not do this, the doctor had best look elsewhere for a remedy.

### OUR CO-LABORER, THE DRUGGIST.

The subject of the medicine fakir naturally leads to the question of our relations with druggists. Much has been said on this topic, but it is difficult to see wherein the status of our relations to our alleged co-worker has been improved thereby. Personally, so long as the drug business is overcrowded, as it is at present, I fail to see any possibility of improvement. Under existing conditions the motto of the druggist must necessarily be, "every man for himself." The pharmacist must live, and there's no way to live and be square with the doctor. Three things that are opposed to our interests the druggist must do or go to the wall: 1. Sell patent medicines. 2. Prescribe over the counter. 3. Charge exorbitantly for the medicines we prescribe. There is nothing in all this that is illegal, but it is opposed to the best interests of the profession. At first sight it appears an evidence of imbecility to send prescriptions to be compounded by a competitor. Yet we send them to the druggist, who is our most active competitor. Not only is he one directly, but he is often the agent of some other doctor or doctors whose merits he glibly contrasts with our demerits, for the edification of the patient. We tell him, time and again, not to repeat our prescriptions, but to no purpose. In some cases we know that he is giving commissions to one set of doctors while his clerks are getting commissions from practice sent to others, yet we stick to him. Now, there's but one solution of the problem. Every doctor who can should dispense his own medicines. The people like it, and the profession will soon learn to like it. The doctor can furnish medicines cheaply and still make a profit. The patient pays a bill for services and medicines much more cheerfully than one for services alone. Such success as homeopathy has attained has been largely along these lines. It is high time the regular took the hint.

Not the least of the good things that would result from the doctor doing his own dispensing would be the familiarity with his working tools thus acquired. Most men enter practice without the least knowledge of the physical qualities of the drugs they expect to use. Many a man has prescribed, over and over again, remedies he never saw, smelt or tasted. The best doctor is he who is most familiar with his curative agents. Another desirable result would be the doctor's renunciation of polypharmacy. He would soon learn that the number of serviceable drugs is by no means legion. Where a number of doctors occupy an office, they should have their own dispensary. When neither plan that I have suggested is feasible, the doctor should endeavor to find a druggist who, in consideration of having practically a monopoly of the prescriptions of that particular physician, will dispense his prescriptions on cipher and never without an order. It is possible to find such druggists. Self-interest is likely to induce them to treat the doctor fairly, when all other arguments fail. There is a peculiar advantage in this system in the fact that the doctors' favorite formulæ can be kept in quantities already prepared, thus saving time, and assuring uniformity in dispensing. Under such an arrangement, too, the druggist is able to be much more reasonable in his prices. He is also likely to keep such special preparations as the doctor may request, thus avoiding the temptation to substitute.

One thing is certain in the relations of doctor and druggist, viz., the time is not far distant when the doctor will either dispense his own drugs, or will boycott every druggist who counter-prescribes or sells patent medicines. The profession will not go blindly on forever, carrying grist to the other fellow's mill.

### RELATIONS OF DOCTORS TO CORPORATIONS.

It is a time-honored observation that the doctor is about the cheapest professional commodity in the market. Especially is he cheap in his dealings with corporations. Nowhere is this more evident than in life insurance work. There is not a company in the field today that pays a decent sum for its medical examinations. The doctor is the watch-dog of the company's treasury. He stands between it and great financial loss. He protects it against fraud. A slight error or the least degree of negligence on his part may cost the company thousands and thousands of dollars. The issuance of a policy is a very important business transaction. The doctor stands in the same relation to it as does the lawyer who examines the abstract in a real estate deal. Contrast the fee allowed the medical examiner in a case involving the issuance of a $100,000 life insurance policy and that received by the lawyer who examines the abstract in a real estate transfer involving $5000, and my argument is complete. Some companies expect to secure all of an expert examiner's time—and actually get it—for $2000 to $3000 a year. It might be well to contrast, also, the commission received by the agent who writes the policy, with the medical examiner's fee.

In the case of our fraternal societies the examiner's fees are pitifully low, so low that a busy man can not do the work save at a great loss of time. There are some extenuating circumstances in the case of the cooperative societies. In the case of both old line and cooperative insurance, however, only the overcrowded and generally poverty-stricken condition of the medical profession can possibly explain the fact that good men are to be had so cheaply.

Railroad and manufacturing corporations have no difficulty in securing doctors to look after their interests at a rate so low as to reflect on the respectability of the profession at large. I know, for example, instances in which doctors are rendering for $300 a year, services that should bring several thousand dollars at very ordinary fees. In addition to this direct cheapening of professional values, the company or corporation surgeon is expected to go on the stand as expert and prevaricate in the interests of his employers. As a corollary, he is expected to testify against the interests of the poor fellow who, perhaps, as the result of the company's wilful neglect, has only the wreck of a once vigorous hood with which to oppose the company's immense tal. And this the doctor do fortable portion of cases. When I s." I h I am correct. It would expe.

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opinions rendered by some corporation doctors were the result of ignorance. The corporation expert does not always prevaricate. The truth may be the best card to play. He had best not let the corporation catch him telling the truth, however, when said truth is prejudicial to its interests. There is an axe, my brethren, an axe that is ever ready.

Speaking of corporation surgeons reminds me of the fact that practice in the neighborhood of our large factories is rather poor picking for everybody. There is plenty of work to be done, and would be considerable income derived therefrom, but the corporation surgeon gets it all, and receives a mere pittance therefor. The corporation claims to employ a surgeon for humanity's sake. This is pure hypocrisy—the doctor is employed for its own protection. I know of cases in which, by the co-operation of the claim agent and the surgeon, an injured employee has been induced to sign away his manifest rights. He is usually denied the right to select his own surgeon. To the non-partisan medical observer, the bitter opposition of the average juryman to corporations is in no wise remarkable. I suppose it will be argued that there are plenty of honest corporation-doctors. Grant you that, brother, but I can not see how they hold their jobs.

### FEES IN GENERAL.

If the profession is to be judged according to its own valuation, the low estimate of the value of medical and surgical services by the public at large is not to be wondered at. Especially striking is the low appraisement of fees in the West. The contrast between the East and West in this regard was recently impressed on me quite forcibly. I met, in the city of New York, a comparatively young practitioner who recently chanced to have under his care a young woman—daughter of a multi-millionaire—suffering with typhoid fever. He attended her assiduously, night and day for six months, and brought her through, or came through with her, most gloriously, and probably skilfully. With a courage that seems superhuman to a western doctor, our young friend sent in a bill for $5000. A check for the amount was promptly returned with a letter of thanks and a "bonus" check of $50,000. And now, brethren, you will forgive me if my style is a bit "wabbly" from here on. A Chicago millionaire would have "kicked" on the bill, insisted on being cut down to $500 and, this being done, would ave stood a suit rather than settle at his own figure. Exaggeration? Well, I don't know about that! One of our greatest "merchant princes" was under the care of a specialist friend of mine, and, as his own time was very valuable, demanded that the doctor let him in at his private door, ahead of all the rest of the patients. His bill at $10 a visit amounted to something over $300. The "kick" registered by our "prince" might have been heard in Alaska. Result, the bill was cut in two and the doctor has another enemy on the list.

But I can beat this case in my own experience: Another merchant prince, who is well known on State street—we will call him Mr. Bird, because that's almost his name and he is one—came to see me one day in this wise: He had heard that I had recently operated on a friend of his and removed a renal calculus. Would I show him the specimen? He then gradually developed the interesting fact that he had gall-stones and had been advised to submit to operation. What did I think of his case, and what about his operative prospects? Three-quarters of an hour slipped away, and my opinion in general had been obtained, when I suggested a physical examination. Oh, well, you see, it has grown so late that I will not have time to-day. I'll see you day after to-morrow," etc. That same evening, while riding to a case in consultation with one of my surgeon friends, that gentleman said, "Oh, by the way, Lydston, I'm going to operate on Bird to-morrow for gall-stones." And so it proved. I sent Mr. Bird a bill for consultation and he replied that he owed me "nothing," had "just made a friendly call," etc. I finally threatened suit and he paid the bill grudgingly, and as insolently as he dared at long range. Let me assure the reader that that $25 was a sweeter morsel than ten times the amount from any other source. Oh, how it must have hurt my friend Bird! I trust he will be a mine of wealth to my surgical confrère—he has "gall" enough to run a stone quarry in his hepatic apparatus for a hundred years to come.

The attitude of the average wealthy Chicagoan on the medical fee question was well shown a few years ago by the rumpus that was raised in the newspapers over a fee of $2000, charged by one of our leading experts in intubation, for a successful operation on a certain wealthy citizen's child. That numerous physicians arrayed themselves against the operator was by no means the least disgusting feature of the controversy.

Medical fees in Chicago have not yet shaken off the incubus put on them by the dollar fee of the medical "daddies." When Chicago was yet new, the fee question was practically settled by some of our medical pioneers whose influence has never been dispelled. The one dollar consultants were over-modest. We have always been ready to concede that such fees are an undervaluation of the aforesaid consultants' skill. The profession has ever refused to take some men at their own valuation—but it has suffered from the incubus just the same. Philanthropy has been advanced as an explanation of cheap fees. Quoth the experienced and distinguished low-priced man, "What would the poor people do if I made myself less accessible?" I'll tell you what the suffering public would do, most venerable and respected sir. It would go around the corner to that young doctor whose shingle you see swinging to the breeze, and pay more money for better service than you or any living man can give for the fees you charge. In general, the public gets just about what it pays for, save where the matter is one of absolute charity or dead-beatism. How any busy man can take the time for a careful examination and diagnosis of a case without asking a half-way respectable fee for his services is a problem I have never been able to solve.

Aside from the general cheapening of medical services, the doctor himself is often responsible for the direct depreciation of other physicians' fees. This is done in several ways: One method is to misrepresent the financial status of the patient whom he takes to an expert for consultation. It is not long since a physician called me up by telephone and arranged for me to see with him a "poor patient" who could only pay a small fee for consultation. The doctor happened to be late at the consultation, and I occupied the time in questioning the patient. I discovered that he was a wealthy stock raiser from the West, had paid my doctor friend a good fee already, and had arranged to pay him $200 more for the prospective operation—which I was expected to tell my friend how to do.

It is frequently the case that general practitioners call a consultant without making arrangements for the fee beforehand. It is unpleasant to spend half a day or night in consultation and then have the doctor say, "Now, doctor, these people haven't got much money, so don't charge them a large fee." The consultant there-upon cuts his fee in two. "Well, doctor, I'll see that you get it in a day or two." But the consultant never gets it. Should he protest, the family physician says, "Don't be in such a hurry, doctor, I haven't got anything out of the case myself, yet." The above is an experience that I have had over and over again. How easy it would be for the physician who calls the consultation to see that the fee is ready when the consultant comes. It is my opinion, furthermore, that unless there is an understanding that the case is one of pure charity, the physician calling the consultation should be held responsible for the fee. The consultant can not always do so, but where possible he should stipulate beforehand that a certain fee be in readiness. The family physician who does not know that such a plan is best for his own interests is stupid.

An intolerable nuisance to the consultant is the doctor who writes a friendly letter asking for "the diagnosis, prognosis and treatment" of some case under his care. Rarely does he enclose a stamp, never a fee. The consultant who answers such letters, save to inform the writer that office rent can not be paid by such consultations, is laughed at for his pains. I have made many enemies by answering in this wise, but I love my enemies and have not injured the financial side of medicine thereby.

A more "pestiferous professional parasite" if possible, than the foregoing, is the doctor who refers a patient from a distance, with a request to send the bill to him. I have sent many such bills first and last—accent on the "last"—but have never yet received a remittance, nor do I expect my reward in Heaven. In the first place I am not so sure about getting there, and if I were, and knew that those doctor debtors were going to be there too, I—well, I'd ask for a change of venue. As for the patients who are accessories to such professional "hold-ups," a fellow wouldn't want to chase around all over hades to collect his fees from them.

As a final proposition on the fee question, the doctor should understand that no fee within the range of the patient's ability to pay is ever too great for medical services. The doctor is never in danger of being over paid. He should "temper the wind to the shorn lamb," but appearances are deceitful, and the doctor had best be in at the shearing, else there will be no wool for him. "Virtue is it's own reward" may sound very pretty, but it is not consoling in view of the fact that it gets no other in this life and its reward in the world to come is rather problematic.

### EXCESS OF "BUSINESS ZEAL."

While still enrolled in the ethically-regular ranks of a profession whose standard is illumined by the quintessense of mawkish philanthropy, some of the brethren have gone to the other extreme and covertly adopted "business" methods that put Chatham Street to the blush. As for the dealer in second-hand clothing, who lies in wait for the unwary reuben in the purlieus of South Clark Street, he has cause to hang his head for very shame. Time was when the practice of medicine and surgery betokened a certain degree of modesty in heralding one's skill to the world, and waiting for patients was fashionable. It has come to pass that a certain proportion of the profession has divided itself into two parts, composed respectively of operators and "steerers." The operator offers a liberal commission to the doctor who steers cases to him for operation; 50 per cent. is the regular commission now-a-days. The steerer was contented with less, at first. In time he will want a still further increase. Finally, there will be no pay patients and the operator will be "hoist with his own petard." The steerer's gall is even greater than the operator's moral turpitude and business imbecility. One of my friends showed me a letter to-day from a barbarian of the tribe of "Get there Eli," in which the doctor who proposed sending him a patient said, "The woman will do just about what I tell her. She is business-like, and so am I. I think she will stand for $200. Now, if you can see any money in that after giving me $100, I'll send her to you, if not, why I know plenty of others who will take the case on those terms. She is my meat, and will go where I say. I am not charging $100 for my time, but for steering the case to you. This is my game and I can steer the case where I please," etc.

How is that for a *fin de siècle* medico-epistolary gem? Is it possible that an operator can afford to give up one-half of his fee as a commission? If so, the difference between fees and highway robbery is not perceptible to the average mind. Somebody is necessarily robbed. If the fee is just, the steerer robs the surgeon; if the fee is exorbitant, then the patient is robbed. What would the patient say if he knew of the deal? The commission practice is very poor business—and worse morals. The extent of the nefarious custom in our large cities is simply nauseating. It is possible that the adverse sentiment of the better class of practitioners may eventually serve to put a stop to this degrading practice. If not, there is a sure, albeit a disagreeable, way to check it, viz., by means of the public press. Should this recourse ever be demanded, there is much interesting material at hand. The possibility of unnecessary and unjustifiable operating under the stress of a large fee on the one hand and a large steering commission on the other, would make very interesting food for journalistic reflection. And so, friend steerer and brethren of the bisected fee, have an eye to windward and look out for squalls.

Even lower than the bisection of fees has the occasional doctor sunk. Over on the "great West Side" lives an undertaker friend of mine, who, in deference to his ancient and honorable vocation, we will call Mr. Watery Weeps. My friend Weeps has an eye to business; in faith, he has two eyes to business—both of 'em red; some say from "red eye" homeopathically applied. I do not believe this theory regarding Mr. Weeps' headlights. Their peculiar bicycle-lamp glow, like their excessive humidity, is due to his faithful, sorrowful "proxifying." In the course of my practice it did befall that a certain pulmonopathic vassal of mine—we will designate him as Mr. One-Lung, in so much as he had no other lung—did feloniously, with malice prepense and aforethought and intent to deceive, up and die. Having a corpse on my hands I naturally bethought me of my post-medical friend, Weeps, who undertaketh much in that vicinity. Weeps was prompt, and my late friend of the pulmonary solitaire was soon duly boxed and crated, ready for shipment to his ancestral home in "Injianny," whereupon quoth Weeps, lachrymosing his prettiest the while: "Ahem, Doctor, I am very much obliged to you for the favor you have shown me. I hope to do a large share of your business in the future. I expect a check for this job to-morrow, and will then extend to you the usual courtesies to the medical profession." "Ah," I replied, "and what might that be?" Why, 25 per cent. I call that pretty good, too, considering the hard times, don't you Doctor?" And my friend Weeps still thinks I was bluffing when I declined the "usual courtesies." "Truth is strange, passing strange —stranger than fiction."

Time does not permit me to do full justice to the doctor whose motto is "get patients, honestly if you can, but—get patients." Sad it is that such birds are by no means rare. True it is, and complimentary to the American doctor, that these creatures are usually importations, whose foreign diplomas, having no standing in their own country, at one time permitted them to practice in any part of the Union, and even now permits them to practice in many parts of the country. The advancing requirements of our colleges and state boards are fast doing away with such fellows.

The man with a strictly business appetite for fame is, however, always with us, and who shall say him nay in his struggle "topward?" But should he not draw the line somewhere?

Such ambitious ones agree with that dear old philosopher, Michel de Montaigne, "That men by various ways arrive at the same end."

Some of these Machiavelli's have literary aspirations. I know of one of them who justifies his literary efforts by printing his portrait as a frontispiece for his reprints, and in turn justifies his portrait—full page—by condensing his subject matter to a page and a half. Conservatism impels him to present only such matter as has been oft and better said before, whilst his portrait is laid on the altar as a burnt offering, a mute and modest appeal to the "star-eyed goddess"—Science, whose unreasoning demand for original matter has wrecked so many fair hopes. And the goddess, seeing the portrait, needs no priestly intercession to call her attention to its originality.

Far away on the arid plains of Arizona stands a little white head-board, commemorative of the late Jack King —short card expert and erstwhile monte sharp. Thereon appears the sentiment, "Life ain't in holdin' a good hand, but in play' a poor hand well." Dost see the application, my brethren? A restless ambition may with unscrupulous hands so spread a teaspoonful of brains over the fair field of workaday life that the sunflowers of worldly success will grow, and grow, and choke the life out of everything beneath.

### TACIT RECOGNITION OF MEDICAL FAKIRS.

In the good old days the regular profession ostracised him who consulted without that horrid bugaboo, the homeopath. It has come to pass that the regular lion has laid him down beside the homeopathic lamb. And when they rise again the mutton shall be no more, and the lion shall have waxed fat. The latter-day regular has gone farther, and hobnobbed, as on equal terms, with "osteopaths," "Christian Scientists," "faith healers," and others of their ilk. Not so? Oh, yes it is. It is not long since the Physicians' Club of Chicago invited representatives of these fakes to break bread with it, and formally discuss the merits and demerits of their fool theories as opposed to regular medicine. The affair was given great publicity in the newspapers, and the wise layman, reading thereof, laughed exceedingly merry and said, "What fools these doctors be." And, from a business, politic, and social standpoint, were they really so very clever? The Physicians' Club gave the fakirs standing in the public eye, and by inviting them to a joint discussion gave them professional recognition —a recognition they were not slow to use as a valuable advertisement. If a dinner invitation does not constitute social recognition, what does? I submit that the action of the Physicians' Club did more to further the interests of the fakirs that infest our city than the fakirs themselves could have done in a year. Still, mistakes will happen, and the worst that can be said of the club is that it made a serious, impolitic, and unbusinesslike blunder. False dignity, I would have none of; "'tis but a mysterious carriage of the body to cover up defects of the mind;" but I fain would see the body medical possessed of too much true dignity to permit *formal recognition of medical fakirs and their disciples.*

It is much easier to direct attention to faults than it is to suggest remedies therefor. In most of the points that I have endeavored to make, the remedy suggests itself. In general, the remedy lies in an improvement of professional *esprit de corps.* With a betterment of this as a foundation, much can be done to improve the business aspect of medicine in its higher sense. The general disapprobation of the profession will eventually frown down the medical pirate, who considers his duplicity and knavery, "business." The time will come when professional co-operation in the broadest sense will be absolutely necessary if we would survive. A little of the spirit of trades-unionism might not be a bad thing. So far as the strictly financial aspect of legitimate practice is concerned, the sooner we impress the public with the idea that we appreciate our own market value and insist on its appreciation by the public, the better it will be for the profession. Once let it be understood that ours is a business-like and financially-sound profession, and the *hoi polloi* will give us the respect that is our due. If the profession at large would but send monthly statements of accounts, a great deal might be accomplished. The public should have frequent and pointed reminders that there is more than a philanthropic side to our labors. The doctor's wife and children deserve quite as much consideration as the layman's.

There is much in this lecture that may be unwelcome, but surely there is something which will appeal to the fair-minded, square-principled physician. Whatever judgment may be passed on it, however, my object has been to champion the cause of the high-minded, right-thinking, hard-working doctor—the under-dog in the battle of life.

I know that the world, the great big world,
  From the peasant up to the king,
Has a different tale from the tale I tell,
  And a different song to sing.

But for me—and I care not a single fig
  If they say I am wrong or right—
I shall always go in for the weaker dog,
  For the under dog in the fight.

I know that the world, the great big world,
  Will never a moment stop
To see which dog may be in fault,
  But will shout for the dog on top.

But for me, I shall never pause to ask
  Which dog may be in the right,
For my heart will beat, while it beats at all,
  For the under dog in the fight.

Perchance what I've said were better not said,
  Or 'twere better I'd said it incog;
But with heart and with glass filled chock to the brim,
  Here's luck to the under dog.

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THE NEW children's hospital at Athens is arranged with twelve separate pavilions, each designed for a different disease. Four are reserved for contagious diseases.

# CLINICAL REPORT.

## GASTROENTEROSTOMY FOR CARCINOMA OF PYLORUS.

BY J. HENRY BARBAT, M.D.

SAN FRANCISCO.

The following case is reported to show the benefit of making a gastroenterostomy in cases of inoperable carcinoma of the pylorus, where the disease has advanced so far that the patient is starving to death on account of vomiting due to occlusion of the pyloric orifice.

Mrs. F., aged 45 years, the mother of four children, had enjoyed perfect health until two years ago, when she began to vomit after eating and felt slight pains in her stomach. This kept on increasing, and the patient began to lose flesh, until when I saw her, February 28, she weighed but 90 pounds. I found a mass in the region of the pylorus, about as large as a hen's egg, and advised immediate operation, explaining that I might be able to remove the entire area of disease, and if not, I would at least make an opening to allow the food to pass into the intestine, and prevent her from dying of starvation.

Two weeks later the patient came to the Waldeck Sanatorium, and at that time weighed 83 pounds. She vomited everything she took and suffered intense pain in the epigastrium. There was scarcely any bowel movement, as she could not retain sufficient nutriment to produce any. For five days previous to the operation I gave her 8 ounces of peptonized milk every six hours by the rectum, and this gave her stomach a rest and relieved her hunger and thirst. It was necessary to give her hypodermics of morphin every six or eight hours, to relieve pain.

I operated on March 20, making a median incision above the umbilicus; the pyloric end of the stomach was found adherent to the anterior abdominal wall, and also to the liver, making it impossible to remove all the diseased tissue. Even if it had been possible to make a pylorectomy I doubt whether the patient would have survived the shock, as her condition demanded very rapid work. I decided to do a gastroenterostomy and lifted the great omentum so as to reach the posterior wall of the stomach. The transverse mesocolon was torn through and the posterior wall of the stomach pulled through the opening. The jejunum was then cut about four inches below the end of the duodenum, and the distal end joined to the stomach by means of a 1 1/16 inch Murphy button. The proximal end of the jejunum was then joined to the side of the distal portion about four inches below the stomach, with a Murphy button of the same size, and the abdomen closed. Considerable difficulty was experienced in placing the stomach half of the button, on account of the fact that the patient began to vomit as soon as traction was made on the stomach.

For two days the outlook was very dubious, the patient having considerable pain and being extremely weak; however, she did not vomit, and was able to retain all the nourishment which was given her, which consisted of peptonized milk and broths. Rectal feeding had to be stopped on account of the rectum becoming irritable, two days after the operation, and all nourishment after this was by the mouth.

The buttons were passed on the tenth day, one passing twelve hours before the other. The appetite soon became ravenous, and the pain almost completely disappeared, but the patient began to cough, and it caused her considerable distress. This is a feature which I noticed in several other cases in which gastroenterostomy was done for the relief of inoperable cancer of the stomach, and I believe it to be due to the disturbance of the pneumogastric nerve.

The patient left the hospital on April 14, weighing 93 pounds, and has since been gaining at the rate of one-half a pound a day, until at the present writing, May 1, she weighs 101 pounds. She has not vomited once since the operation and eats everything that she fancies. In order to facilitate digestion, I gave her a mixture containing caroid and hydrochloric acid, as the analysis of the stomach contents showed complete absence of hydrochloric acid, and very little peptone. By this means she is able to digest large quantities of food without the slightest discomfort, and once more enjoys life.

In the several operations which I have done for the relief of inoperable pyloric obstructions, I found that the patients are more than pleased at the relief they get, and invariably state that they would prefer the entire discomfort of the operation, to one day of the misery which was present before the operation.

There is a marked difference between the cases in which we do the single or double anastomosis, as we are very likely, in those where the jejunum is simply joined to the stomach by means of a lateral anastomosis, to have the bile regurgitating into the stomach and causing vomiting; while, when we make a double anastomosis this unpleasant feature is avoided, because the bile meets the food four or five inches below the stomach as in the normal condition.

This case illustrates very forcibly the advantages of the Murphy button for anastomosis work, on account of the rapidity with which it may be introduced. This patient would undoubtedly have died on the table had I attempted to make two anastomoses by any of the suture methods.

# SPECIAL ARTICLE.

## RELATIONS OF PHARMACY TO THE MEDICAL PROFESSION.*

### VI.

The medical and pharmaceutical status of the medicinal articles heretofore considered may be easily estimated as compared with those remaining for consideration, viz.:

### THE PHARMACEUTICAL SPECIALTIES.

Under this title are comprised all pharmaceutical or chemical preparations—not definite compounds—whose composition is well known, either through the name of the article or published formula. There are many articles having a descriptive name which are, however, more or less secret in composition through lack of adequate information on the part of the manufacturers. Such information has, however, been supplied by pharmacists and chemists who have examined these articles and reported their results. Based on such reports formulas have often been constructed, which not infrequently have been incorporated in the United States Pharmacopeia and in the National Formulary. Many of them have names not sufficiently descriptive, in order that they may be protected as trade-marks or copyrights, and in this lies the chief objection to these classes. They are divided into: 7. Pharmaceutical Specialties—Mixtures, and 8. Pharmaceutical Specialties—Simples.

### MIXTURES.

This class may be divided into the following groups: 1. Preparations of official or unofficial formulas, i. e., chlorodyne, Warburg's tincture, etc. 2. Chemical solutions, syrups, elixirs, glycerites, etc., with proprietary names prefixed and suffixed. 3. Cod-liver oil emulsions or preparations as above. 4. Compound vegetable preparations of eclectic origin, as above, or under trade names. 5. Miscellaneous mixtures under trade names, simulating patent medicines and sold to the laity.

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* The first of this series of articles appeared in The Journal of April 21.

### CHLORODYNE.

One of the earliest and by far the most celebrated of this group is the preparation known as "chlorodyne," originated by J. Collis Browne, a British surgeon, and sold as a "patent medicine" in England where yet Browne's widow and diver other persons perennially exhaust the possibilities of affirmative adjectives in assertions of their respective claims to "the only original formula," and in spite of the fact that the preparation has long been recognized in the British Pharmacopeia with a formula vastly improved over the original, which contained treacle and yielded an unsightly and unstable mixture. Having been used successfully in India against cholera, it attained great celebrity some forty or fifty years ago, and various formulas are published for its preparation. Whether or not owing to the lack of information on the part of the examiners or the lack of uniformity, owing to instability of the article itself, these formulas varied so greatly in the proportions of the active ingredients, that its introduction in the Pharmacopeia became a medical necessity. Some twelve years ago a comparative exhibit of a score or more formulas then in vogue in this country and in England was published in the pharmaceutical journals and the startling information conveyed that one formula would yield a preparation ten times stronger in the most active ingredient, viz., morphin sulphate, than some other popular formula; the desirability—nay, necessity—for some official standard in largely used and potent medicines was never more strikingly demonstrated. Uniformity in strength may not be absolutely uniformly attained by all employing the same formula, but it is self-evident that the chances for this *desideratum* are vastly in favor of the former as against the promiscuous employment of formulas of widely varying strengths and proportions. The following is the formula of the National Formulary:

Mistura chloroformi et cannabis indicæ compositæ—compound mixture of chloroform and cannabis indica—(Chloroform anodyne).

| | | | |
|---|---|---|---|
| ℞. | Chloroformi | 125 | |
| | Etheris | 35 | |
| | Tinct. cannabis indicæ | 125 | |
| | Tinct. capsici | 65 | |
| | Morphiæ sulphatis | 2 | 5 |
| | Ol. menthæ pip | 2 | |
| | Glycerini | 125 | |
| | Aquæ | 65 | |
| | Alcoholis, q. s., ad | 1000 | |

Dissolve the oil of peppermint in 500 c.c. of alcohol; add the chloroform, ether and the tinctures; mix and add the morphin, previously dissolved in the water and glycerin; finally add alcohol enough to make 100 c.c. Each fluidram represents .5 gm.—7½ minims—each chloroform and tincture of cannabis; .25 gm.—3¾ minims—of tincture of capsicum, and .01 gm.—1/7 gr.—of morphin sulphate. The "chloranodyne" of Parke, Davis & Co. is a similar preparation. The old well-known Hoffman's anodyne or compound spirit of ether is more simple in composition, containing 2.5 per cent. of ethereal oil in ether-alcohol.

### WARBURG'S TINCTURE.

Somewhat similar in origin is the so-called Warburg's tincture, originated by one Dr. Warburg, a British surgeon, stationed in India. Warburg found that the antiperiodic effects of quinin were much enhanced through its administration in a mixture of bitter tonics, and formulated a tincture to be used as an adjuvant vehicle. The formula originally included aloes, which was found objectionable owing to its bitterness and to its cathartic effect and was therefore subsequently left out; two formulas being in vogue, one with and another without aloes. The following is the formula of the National Formulary:

Tinctura antiperiodica (sine aloe)—antiperiodic tincture; Warburg's tincture—(without aloes).

| | | |
|---|---|---|
| ℞. | Rhei et angelicæ sem., āā | 36 |
| | Inula, crocus et fœniculi, āā | 18 |
| | Gentianæ, zedoariæ, agaric blanc, cubebæ, camphoræ, myrrhæ, āā | 9 |
| | Quininæ sulphatis | 100 |
| | Alcoholis, dil. (U. S. P.), q. s., ad | 5000 |

The coarsely powdered drugs are exhausted with the dilute alcohol, by digestion for twelve hours, and in the liquid obtained by expression, the quinin sulphate is dissolved and dilute alcohol added to make 5000 c.c. .of filtered tincture. Each 5 c.c. contains .1 gm.—1.5 gr.—of quinin sulphate. When the tincture with aloes is wanted it may be easily prepared by dissolving 1.75 grams of extract of aloes—the official so-called aqueous extract—in 100 c.c.; or 8 gr. in 1 fluidounce. The original formula directed by Warburg contained confectio Damocratis as one of the ingredients, which, owing to its complex preparation has been omitted in the present formula. From the fact that the formula included this confection, it is evident that Warburg simply adopted one of the most ancient polypharmacal compounds—*elixir ad longam vitam*—to his use, and added to it camphor. Numerous formulas for species—"teas"—for the preparation of this elixir appear in the old-time dispensatories and pharmacopeias, of varying proportions, but substantially as the above with the addition of galanga, the highly extolled-"East India tooth-ache root" of the traveling fakirs. Is there anything new under the sun?

The confectio Damocratis, a mixture of nearly every potent drug known to the ancients, the ultima Thulé of pharmacal knowledge, was superseded by the confection of Andromacchus, the rival body-physician of Nero, who improved the composition by adding to it the flesh of snakes, whence it derived the name of theriac—thyrus-snake. Originally the formula contained 137 ingredients, and after being in use over 1000 years appears in the Pharmacopeia of Valerius Cordus, 1546, with only 55 ingredients. This confection was the most famous medicine ever produced, as late as 1754 its annual preparation in Nuremberg being a holiday, the ingredients being exposed on the public market-square for one week for official inspection, the compounding being conducted under the supervision of the city dignitaries, amid great festivities, and the product being branded with the municipal arms. The formula for theriac of the French Codex to-day contains 57 ingredients, and it survives in the British and some other pharmacopeias as confection of opium, this drug being the most potent ingredient. Theriac is still largely used in this country as an ingredient in the species referred to by Germans and other Europeans as "Schwedisches Bitters," "Hjerne's Testament," etc., for preparing the elixir.

### THE HYPOPHOSPHITES SYRUPS.

The second group comprises the larger number of the so-called "elegant" pharmaceuticals which appeared about 1870, and in the form of syrups, elixirs, wines, etc., became exceedingly popular with the medical profession. The earliest of the chemical syrups representing the tonic properties of the phosphorus then coming greatly in vogue were: "Churchill's syrup of hypophosphites," "Easton's syrup" and "Parrish's Chemical Food," the two first-mentioned being of English origin, the latter introduced by the well-known pharmacist, Parrish of Philadelphia.

The principal hypophosphite salt employed in the preparation of this syrup has always been, since first introduced by Dr. Churchill, the calcium hypophosphite and to this fact the difficulties attendant on the production of a satisfactory syrup are chiefly due. The calcium salt is rather sparingly soluble in water and for this reason a small quantity of citric or hypophosphorous acid is used to insure the complete solution of the salt in the water, in which the sugar is subsequently dissolved. The other salts which enter into the preparation, the sodium and potassium hypophosphites, are on the other hand so exceedingly soluble, the potassium salt being deliquescent, as to cause the throwing out of solution the calcium salt present in much the greater proportion, and the syrup consequently often precipitates and becomes unfit for use. When in addition to this contingency there is lack of care in the selection of pure salts—the commercial American makes being far from satisfactory products, with but one exception—and the possibility of using "laundered[1] sugar," and instead of distilled water an article containing lime and other impurities, the preparation of syrups by hypophosphites is not so simple a proposition as it appears to be.

It is for this reason that several different brands of syrup of hypophosphites have received medical favor and preference over the preparation made according to the official process for syrupus hypophosphitum (U. S.), or syrupus hypophosphitum cum ferro (U. S.) the latter containing 1 per cent. of ferrous lactate as the most eligible iron compound to combine with the hypophosphites of calcium, sodium and potassium. The claims for superiority of these specialties are based on the purity of the hypophosphite salts employed and care in the preparation of the syrup so as to produce stable, eligible and therapeutically satisfactory preparations.

### IRON, QUININ AND STRYCHNIN COMBINATIONS.

Under the name of Easton's syrup, a preparation was introduced in England, which became official in the United States Pharmacopeia of 1880, and was retained in that of 1890, now official under the title, "syrupus ferri, quininæ et strychninæ phosphatum." It contains about 2 grs. of quinin sulphate, 1½ grs. of ferric phosphate and 1/90 gr. of strychnin in excess of phosphoric acid in each fluidram. The formula of 1880 contained 1/34 gr. of strychnin in 1 fluidram. That of the British Pharmacopeia contains 1/32 gr. of strychnin in a fluidram, a strength entirely too great for a syrup which may be taken in tablespoonful doses and then produce the most serious results.

The elixirs of iron, quinin and strychnin, phosphates and pyrophosphates respectively are more stable and satisfactory preparations. The National Formulary gives the strength of the first mentioned as being in each fluidram 1 gr. of phosphate of iron, ½ gr. of quinin, and 1/64 gr. of strychnin. The elixir ferri quininæ et strychninæ (N. F.), made with the tincture of citrochlorid of iron, or the so-called "tasteless tincture of iron," contains only 1/100 gr. of strychnin in each fluidram, and is by far the most eligible and stable of these various elixirs.

### FELLOWS' SYRUP OF HYPOPHOSPHITES.

A preparation of similar composition, "containing potash, lime, iron, manganese, quinin, strychnin and phosphorus combined in the form of a syrup with a slightly alkaline reaction," under the name of "Fellows' Compound Syrup of Hypophosphites," has been very extensively employed by the medical profession. The exact formula has never been disclosed but recently the manufacturer furnished the information that the syrup represents 1/64 gr. (.001) of strychnin in each fluidram —4 c.c. The preparation has been repeatedly examined, and, based on these results, the following has been introduced in the National Formulary:

### SYRUPUS HYPOPHOSPHITUM COMPOSITUS.

| | | | |
|---|---|---|---|
| ℞. | Calcii hypophosphitis | 35 | |
| | Potassii et sodii hypophosphitis, āā | 17 | 5 |
| | Ferri et mangani, āā | 2 | 25 |
| | Potassii citratis | 5 | |
| | Acidi citrici | 2 | |
| | Quininæ hydrochloratis | 1 | 125 |
| | Tinct. nucis vomicæ (U. S. P.) | 22 | |
| | Saccharæ | 775 | |
| | Aquæ, q. s. ad | 1000 | |

The iron and manganese salts are triturated with the potassium citrate and citric acid, and dissolved in 60 c.c. of water with gentle heat. To the other salts, previously mixed, add the sugar and the first solution, the tincture of nux vomica, and finally water sufficient to make 1000 c.c. of the syrup. Each fluidram contains 2 grs. of calcium hypophosphite, 1 gr. each of potassium and sodium hypophosphites, 1/8 gr. each of iron and manganese hypophosphites, 1/16 gr. of quinin hydrochlorate, and 1¼ minims of tincture of nux vomica. This preparation contains the equivalent of 1/32 gr. (.002) of the alkaloids of nux vomica in each fluidounce and should therefore be at least one-fourth weaker than the syrup of Fellows.

These hypophosphite preparations should give the formulas, that is the quantities of the active ingredients in the ordinary dose. Since they are known by descriptive names they are not amenable to the objections directed against those preparations designated by more or less arbitrary or fancifully constructed trade names. There is no objection, therefore, from a medical standpoint, to the employment of these preparations whenever equally excellent official preparations can not be obtained.

# Therapeutics.

## Treatment of Hemorrhoids.

Non-operative or palliative treatment consists primarily in keeping the parts thoroughly cleansed by bathing with warm water and castile soap, and in applying some soothing and astringent lotion during the acute inflammatory stage. The Messrs. Allingham advise for this purpose the following:

℞. Strong subacetate of lead solution..........ʒi
Tincture of opium........................℥ss

M. Sig. One teaspoonful of the lotion to be mixed with one wineglassful of milk, and applied frequently to the anus.

Another formula, which has been found very useful, is as follows:

℞. Fluid ext. hamamelis........................℥i
Fluid ext. hydrastis
Compound tinct. benzoin, āā...............℥ss
Tinct. belladonna ..........................ʒi
Linseed or olive oil, carbol. (5 p.c.) q. s., ad...℥iii

M. Sig. Apply often to the parts.

Hot or cold applications are often of service. Chas. B. Ball, F.R.C.S., considers the local application of a mixture of the extract of belladonna and glycerin, smeared over the anus, and followed by a warm stupe, the best palliative treatment for external hemorrhoids. In addition, the bowels should be freely moved, and a light, easily-digested diet, with rest in bed, prescribed. Any of these remedies will, as a rule, cause the inflammation to subside within a few days, but usually a thickened tag of skin is left, which is liable at any time, on the slightest provocation, to become inflamed.

### INJECTION TREATMENT.

℞. Acidi carbolici ..........................ʒiss
Acidi salicylici ..........................ʒss
Sodii boratis ..............................ʒi
Glycerini (sterilized) q.. s. ad...............℥i

M. et ft. sol. Sig. Injection for hemorrhoids.

Of this fluid from two to four minims are injected into the base of the hemorrhoid. If other injections are to be made, they are made in from three to five days.

## Painless Treatment of Buboes.

Buboes, when suppurating, may be opened painlessly by first injecting beneath the skin a 3 per cent. solution of beta-eucain. After evacuation a 5 per cent. solution is poured into the wound, and after a few minutes curetting may be performed lightly without pain. One dram of solution may be thus used with safety. To obviate the prick of the hypodermic needle in very sensitive subjects, first spray with ethyl chlorid. —*Dalton: Therapist.*

## Treatment of Exophthalmic Goiter.

According to Stewart (*St. Louis Med. and Surg. Jour.*, May), the first injunction as to treatment should be rest, the next attention to the circulation. The two remedies that are invaluable are digitalis and strophanthus, given in doses of 5 minims three to six times a day. Medical treatment, however, is usually unsatisfactory. Ergot is recommended by some; belladonna, either the fluid extract or atropin, should be given three or four times a day or until dryness in the throat appears. Spartein has proved of some value, but is not a very useful drug and should be left as a last resort. Another remedy is carbozolate of ammonia in pill form, beginning with a small dose and very gradually increasing it for two or three weeks. Tincture of iodin in 30-minim to 2-dram doses three times daily or iodid of potash has been used. The ice-bag or Leiter's tubes frequently applied over the heart or lower part of the neck will materially reduce the pulse. Electricity has been of considerable value in some cases, in the form of galvanization of the cervical sympathetic and the cardiac region.

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[1] In granulating sugar ultramarine is often added for the purpose of correcting the yellow color and to give the article a "dead white" appearnce, as is practiced in laundrying white goods. The blue, though present in insignificant proportion, is a sharp reagent and causes much trouble in chemical syrups.

Good effects have been reported from quinin, belladonna and ergot and also silver nitrate in 1/8-gr. doses after meals. The anemia should be met with iron and arsenic. The nutrition of the patient should be looked after. Thyroid extract has not been satisfactory, and Stewart thinks surgery gives most promise of good results.

### Cystitis in Women.

Dr. A. H. Cordier, of Kansas City, writing on this subject, says:

In the treatment of cystitis, the constitutional as well as the local symptoms should receive most careful attention. During the acute attacks the patient should be encouraged to take large quantities of water. This dilutes the urine, thus making it less irritating to the hypersensitive mucous membrane. All articles of diet, as asparagus etc., that act more or less as irritants to the bladder, should be left from the diet list. The bowels should be moved with a saline cathartic, Epsom salts being the best; the rectum should be kept free *from* hardened feces, the patient being placed in bed if the case is a severe one. Remedies directed toward the easing of pain should be resorted to. I would avoid opiates as much as possible, but in their place give the bromids, chloral, cannabis indica, triticum repens, etc. I would not disturb the bladder by treating it locally in the very acute cases. If the disease is first seen in its chronic or subacute stage, most cases require, in addition to the constitutional treatment, a careful application of local remedies. This is best carried out by inspection through the cystoscope. If the cystitis is of gonorrheal origin I have found nothing that acts better than a saturated watery solution of picric acid applied directly to the inflamed surface. Some cases are much benefited by local application of 10 gr. of silver nitrate thrice weekly or a similar solution of protargol. I have not derived much benefit from boric-acid washes, even though used faithfully in many cases. Very weak solutions of potassium permanganate have acted much better in the chronic cases as an irrigating fluid than boric-acid solutions.

### Methylene Blue in Gonorrhea.

According to the *Med. Record* (The Journal, ¶ 31, p. 866), O'Neill, of New York, says that methylene blue administered internally will cure gonorrhea in from four to seven days. To the diplococcus it is especially fatal, while the pyogenic bacteria, that make gonorrhea a mixed infection, succumb very promptly to this germicide. It is best given in gelatin capsules, in 1-grain doses three or four times a day. After the fourth day the dose may be reduced to twice a day. Given alone it sometimes causes irritation of the neck of the bladder, but when combined with oil of nutmeg there is no trouble of this kind; oil of sandalwood is a valuable adjuvant, because of its diuretic action and also on account of its sedative effect on inflamed mucous membrane. Troublesome gastric symptoms may be avoided with the following formula, which has given uniformly satisfactory results:

| | | |
|---|---|---|
| ℞. | Methylene blue | gr. i |
| | Oil of nutmeg | gtt. i |
| | Oil of sandalwood | gtt. ii |

This is given in a gelatin capsule, but never for longer than ten days without intermission, and while taking it the patient should drink freely of water. In no case has the author found it necessary to continue treatment for more than ten days. The mission of the methylene blue is accomplished when it has destroyed the bacteria of suppuration. Positive results from preventive treatment of gonorrhea are not obtainable, still the author believes with Dr. Flint, whom he quotes, that "it is a reasonable scientific proposition that methylene blue would probably act as a prophylactic against gonorrheal infection in impure intercourse."

### Treatment of Myocarditis.

Martin Mendelsohn believes that whatever the cause of myocarditis, be it diphtheria or other infectious diseases, alcohol, phosphorus or syphilis, says the *Brit. Med. Jour.*, the clinical symptoms are always those of a weak heart and require the same treatment; in any case they depend on an inability of the heart to meet the demand made upon it. Thus, supposing the demands to be excessive, they may produce symptoms of myocarditis in a heart previously healthy. In slight cases the symptoms occur only when unusual bodily or mental exertion has been made. In the later stages they are permanent. The physical signs vary, but generally consist in hypertrophy of the left ventricle, with accentuated sounds if compensation is present, or in dilation with weak sounds if it is not. In the treatment all excessive bodily or mental exertion must be avoided, as well as the habitual use of coffee, tea and tobacco. Oertel's treatment, which consists in systematically increasing the power of the heart by exercises, and reducing corpulency by restricting the fluid drink, acts well in obese, but otherwise healthy, patients: but, since it is impossible to eat much without drinking, is not suitable for debilitated patients, where, especially at the beginning of the complaints, absolute rest in bed is the chief remedy, and restores compensation. Later, each patient must aim at keeping his heart exercised by bodily and mental work, while avoiding overexertion. Other important factors are life in an even temperature and pure air, regulation of the bowels, and frequent, though small, meals. Acute attacks of vertigo, palpitation, dyspnea, and cyanosis are best treated with ether and caffein. In chronic cases, drugs must be given with caution, and digitalis should be reserved for those where compensation fails; in others, caffein, convallaria majalis, adonis vernalis, sodium nitrite or potassium nitrite may be tried. Occasionally ergot acts well by its tonic action on the muscles of the smaller vessels.

### Strontium in Exophthalmic Goiter.

The *Riforma Medica*, for March 24, gives the following formula:

| | | |
|---|---|---|
| ℞. | Strontium bromid | 6 parts |
| | Strontium iodid | 12 parts |
| | Distilled mint water | |
| | Syrup of mint, āā | 20 parts |
| | Distilled water | 40 parts |
| M. | Sig. A coffeespoonful three times a day. | |

### Headache in Neurasthenia.

| | | |
|---|---|---|
| ℞. | Zinci valerianatis | |
| | Ferri sulphatis | |
| | Ext. rhei | |
| | Asafetidæ, āā | gr. xviii |
| M. | ft. pil. No. xx. Sig. One three times daily. | |

### Painful Menstruation.

| | | |
|---|---|---|
| ℞. | Codeinæ | gr. ¾ |
| | Chloralis | gr. xv |
| | Ammon. bromidi | gr. xv |
| | Aquæ camphoræ | ℥i |
| Mi | Sig. To be taken while lying down. | |

—*Gaz. Hebdomadaire de Méd. et de Chir.*

### An Intestinal Astringent.

Eugen Doernberger recommends as an intestinal astringent, especially for children, tannopin, which is a condensation product of tannin and urotropin. The dose for children is gr. viiss three times daily, for adults gr. xv three times a day. The dose must be regulated for the individual case. It is especially applicable to children, since it is tasteless; its greatest disadvantage is the expense. —*Med. Record.*

### Treatment of Measles with Red Light.

The Journal has referred to Chatinière's announcement that red light has an abortive influence on measles (vol. xxxi, p. 1120). In *Presse Med.* of April 28, he reports nine more cases treated exclusively with this phototherapy; the windows covered with red curtains and the room lighted at night with a photographer's red lantern. In each case the disease was unmistakably aborted. The eruption disappeared in six hours in most instances; fever, laryngeal and bronchial manifestations were promptly attenuated, and patients had recovered and were allowed to go out of doors by the third to fifth day after first manifestations of the disease. The eruption disappeared first on the regions exposed to the light. He suggests that the effect may be due to the reinforcing of the natural powers of the organism by the action of the red light. He has noted marked nervous phenomena in workmen employed in making photographic plates by red light. Some neurologists claim that red is force-producing. It is a custom in the Caucasus to dress the children in red garments in case of eruptive disease, especially measles.

### Bathing Treatment in Chronic Kidney Affections.

Dr. Groedel, of Bad Nauheim, says that this treatment is contraindicated: 1. In cases of chronic parenchymatous nephritis, and in cases of secondary contracted kidney in which there is from time to time an increase in the albuminuria, indicating an exacerbation of the parenchymatous affection. 2. In cases of contracted kidney with marked circulatory disturbances, congestion, dyspnea, etc. 3. In cases of contracted kidney accompanied by a high degree of arteriosclerosis, and, finally, in cases in which there is an apoplectic tendency and in which there has been an attack of pulmonary edema. Only those cases of contracted kidney in which the circulatory disturbances are mild are benefited by the treatment.

### Treatment of Scarlatinal Nephritis.

In a communication presented at a recent meeting of the New York Academy of Medicine, Kemp (*Medical Record*, April 14, p. 657) advised that in the presence of pulmonary complications due to nephritis in the course of scarlet fever oxygen should be employed from the beginning. As it is a good cardiac stimulant and aids in the elimination of toxins, it should prove of value also in cases unattended with pulmonary complications. Enteroclysis, with the water at a temperature between 110 and 120 F., may be employed for periods of from fifteen minutes to an hour, and as often as three or four times a day. Hypodermoclysis and saline infusions are also useful. Carbonated baths may be recommended for uremic conditions, with the water at a temperature of 98 or 100 F.

### Apocynum in Pleurisy.

An observation of pleurisy with a large effusion, "satellite of incipient tuberculosis," is related by F. Combemale, in *Echo Méd.* of April 22, which was cured without surgical intervention and with remarkable promptness by stimulating diuresis with twenty drops of fluid extract of apocynum cannabinum daily. Four liters of urine were evacuated the first day, then 3½, 3 and 2. An indirect, cardiovascular diuretic is required, the conditions being a serofibrinous pleurisy with large effusion just attaining its maximum, a heart responding well to medicinal intervention and the kidneys rapidly and abundantly permeable.

### Methylene Blue in Grave Malaria Cachexia.

Cardamatis, of Athens, writes to the *Progrès Médical* that he has found methylene blue very effective in the early stages of severe malarial cachexia in cases rebellious to quinin. He recommends it warmly for its action not only on the malarial plasmodium, but also on the consequences of the infection, through its regulating effect on the functions of the kidneys. A typical observation is described, of a child affected with la grippe, traumatic perisplenitis and dysenteriform diarrhea, leading to revival of a light, malarial infection contracted during a stay of a few days in a malarial region a year before, which terminated in grave malarial cachexia and gangrene. The prompt efficacy of methylene blue combined with tepid hydrotherapy was thoroughly attested in this and in other cases in his experience.

### Sodium Cacodylate in Tuberculosis.

M. Letulle has been testing sodium cacodylate on a large scale, and announces that his results have been extremely encouraging. Patients with open tuberculosis have improved more rapidly and the improvement *has been more permanent* than under any other treatment. He follows Gautier's directions, described in The Journal (vol. xxxiii, p. 99), and reports some typical observations in *Presse Méd.* of April 28.

### Treatment of Valve Pneumothorax.

Even when there is a perforation from the lung into the pleural cavity, air does not enter the latter except when forced in by efforts of coughing. Consequently the cough must be prevented, and in a recent communication (*Bull. Soc. des Hop.*, April 12) A. Beclère advocates subcutaneous injections of morphin for this purpose. He also describes a contrivance for diagnosis and treatment, which has rendered him efficient service: a hypodermic needle connected by a rubber tube with a glass tube bent into an L. The longer end is inserted in a test-tube filled with water. Capillary puncture of the pleura in an intercostal space with this contrivance not only serves to differentiate valve pneumothorax but also to cure it, allowing the escape of the accumulated air without danger of subcutaneous emphysema.

### Sodium Salicylate Upon the Biliary Secretion.

A report taken from the Société de Médecine et de Chirurgie Pratiques, the author's name not being given, contains fourteen conclusions, among which are: That under the influence of the drug a slight diminution in diuresis is noted, and an increase in the coloring matter, uric acid, and acidity of the urine. The biliary secretion is increased, as are also the phosphoric acid and fixed matters. The property of the drug in increasing the activity of the biliary function, and the known property of the bile in retarding products of fermentation in the intestine even when it contains no salicylate of sodium, together with the other properties of the drug make its application of great interest in pathology.

—*Jour. de Méd. de Paris.*

### Persistent Hiccough.

| | | |
|---|---|---|
| ℞. | *Strychninæ sulphat* | *gr. 1/40* |
| | Camph. monobrom | gr. ½ |
| | Hyoscyaminæ | gr. 1/50 |

M. Sig. For one dose. Repeat according to indications.

—*Med. News.*

## Medicolegal.

**Still Deemed an Intentional Injury.**—The Supreme Judicial Court of Maine holds, in Matson vs. Travellers' Insurance Company, that, where an accident insurance policy contains a provision that the insurance shall not cover "intentional injuries, inflicted by the insured or any other person, except burglars or robbers," the insured can not recover of the insurer for injuries intentionally inflicted upon him by another, not a robber or burglar, who made an assault upon him, even if the injury sustained was not precisely that intended, provided the act was intentional, was directed against the insured, and some injury to him was intended.

**Affidavit of Physician Not Conclusive.**—The Supreme Court of Illinois holds, in Modern Woodmen of America vs. Davis, that the right of a beneficiary to recover on a benefit certificate can not be conclusively determined from the affidavit of a physician filed by her because the rule of the order requires it to be filed. Nor is she precluded from combating the truth of the affidavit of the physician. Here the certificate in question contained a provision that it should become void if the assured member should become so far intemperate as to prematurely impair his health or to produce delirium tremens, and the affidavit of the physician who attended the assured during his last illness, filed in obedience to a rule of the order issuing the certificate, stated that the immediate cause of his death was acute alcoholism. Yet the court does not consider that this was conclusive of the beneficiary's rights. It says that proofs of death, if in compliance with the requirements of the order, form a legal basis for an action on a certificate issued by the order, even though the proofs contain matter damaging to the case of the beneficiary. The real cause of death remains a question of fact, in the elucidation whereof the beneficiary is not restricted to the testimony of the physician. So it holds here that whether the decedent had indulged in the use of intoxicating liquor so as to permanently impair his health or produce delirium tremens was a question of fact, and the jury having determined it in favor of the beneficiary, the court affirms a judgment entered for her.

**When Must Pay for Maltreatment by Physician.**—*On* the appeal of the City of Dallas vs. Meyers, in an action brought by the latter party to recover damages for personal injuries alleged to have been sustained by a fall on a defective sidewalk, it was urged that the charge to the jury permitted a recovery for increased injury resulting from the maltreatment of the attending physician, provided the party suing exercised reasonable care to select a competent physician, and followed such physician's directions as to treatment, and that this was error. But the Court of Civil Appeals of Texas answers that the proposition involved a question of proximate cause. If the injured party, in good faith, and in the exercise of ordinary care, employs a physician to treat his injuries, and his injuries are aggravated through the mistake or negligence of his physician in his treatment, the negligent or mistaken treatment of the physician, the court holds, does not become an intervening cause, breaking the causal connection between the negligence producing the original injury and the ultimate effects of such injury. In such case, it maintains, the injured party may recover damages for the injury he has sustained, including the aggravation resulting from the negligence of his doctor.

**Quarantine of Double House.**—The Michigan case of Highland vs. Schulte and others, who constituted the board of health, was brought to recover damages by a man, who resided with his family in the east half of a double frame dwelling in Detroit, on account of being quarantined because of a case of smallpox found in the family residing in the west half of the building. There was no passage from one tenement to the other, and the back yards were separated by a high board fence. Nor was there anything to show that the plaintiff or any one in his house had been exposed to the disease, which, however, was epidemic in the city at that time. The order of the health officer, directing that the entire building should be quarantined, was made under a general regulation adopted by the board of health providing that, in all cases where smallpox broke out in one half of a double frame house, the entire house should be quarantined. It was contended, for one thing, that it was beyond the authority of the board to make such a rule. But the Supreme Court of Michigan, which affirms a judgment for the defendants, holds that it was proper for the board of health to make the rule complained of, and delegate to the health officer the examination of conditions and enforcement of the regulation, as from the nature of things, the board could not act collectively on each case that might arise, with the necessary promptness and efficiency. Furthermore, it says that it needs no lengthy discussion to show that the public welfare requires more prompt and stringent measures to prevent the spread of an infectious disease in large cities than is required in rural districts or villages.

**Proper Case to Refuse to Order Examination.**—One of the grounds of error alleged in the Illinois Central Railroad Company vs. Clark, an action originally brought by the latter party to recover damages for personal injuries, was a refusal of the trial judge to require the plaintiff in the lower court to submit to an examination of his foot by physicians in the presence of the jury. It, however, appeared that he was willing to submit to such examination at the hands of a certain named doctor, or perhaps other doctors, but objected to such examination by the railroad company's physicians. Besides, the evidence showed that he was examined by the company's physician soon after the injury occurred, and by another physician who was not unfriendly to the company, if not in fact in its employment. It also appeared that the injured foot was exhibited to the jury. Under these circumstances, the Court of Appeals of Kentucky says that it does not consider that the trial judge was guilty of any abuse of discretion touching the examination asked for, it being largely within his sound discretion whether he would order such an examination, subject to having his decision reviewed or reversed in case of an abuse of that discretion.

**Mere General Practitioner Not Eligible.**—The California act of March 31, 1897, entitled "An act to establish a state lunacy commission, "etc., which is called in the first section thereof the "insanity law," provides for medical superintendents for what it terms the "state hospitals." As to the qualifications of such superintendents its language is as follows: "A medical superintendent, who shall be a well-educated physician, a graduate of an incorporated medical college, of good moral character, and who has not less than three years' experience in the care and treatment of the insane." Now this, the Supreme Court of California holds, in People vs. King, does not include a mere general practitioner, who, in the course of his practice, occasionally meets and prescribes for a person afflicted with some mental disease, and who is not, and does not pretend to be, a specialist in insanity cases, and who has not made the care and treatment of the insane a special study, nor followed it, for any length of time whatever, as a special vocation. As to whether or not the appointee must have been employed for three years in some asylum or institution, either public or private, used exclusively for the confinement and treatment of insane persons, the court does not consider it necessary to decide here, although, it says, the use of the word "care" as well as "treatment of the insane" very strongly suggests that conclusion. Moreover, an effort was made in this case to prove the insanity law unconstitutional. It was attacked, first, as being special legislation, and not having a uniform operation; and, second, as embracing subjects not expressed in its title. But it is held not unconstitutional on either of these grounds.

**Not Considered a "Graduate."**—Richard Metcalfe made application to the Michigan State Board of Registration in Medicine for registration as a medical practitioner under act 237 of the Public Acts of 1899. His application was refused. He then made application for a writ of mandamus to compel said board to register his name and grant him a certificate of registration under the provisions of section three of the act, subdivision one of which provided that the applicant should be registered and given a certificate if he should present sufficient proof within six months after the passage of the act of his having already been legally registered under act No. 167 of 1883, as amended in 1887. He produced proof of having been registered in February, 1897, under the earlier act, and insisted that the board was not authorized by the act of 1899 to look behind the fact of previous registration to ascertain whether he was entitled to be registered, although he conceded that the law of 1899 was within the police power of the state, and that the legislature might have vested the board with full power to investigate the right of the applicant to registration. But, before passing upon the case, the Supreme Court of Michigan says that, inasmuch as the provision relied upon required as a prerequisite to registration without examination that the applicant should have been "already legally registered," it was necessary to turn to the earlier act to ascertain whether he was "legally registered." This provided that every graduate of any legally authorized medical college in any one of the United States should be deemed qualified to practice medicine and surgery after registration, and that the latter might be obtained in certain cases by the filing of an affidavit showing certain facts. Thereunder an affidavit was filed by this party which was as follows: "State of Michigan, County of Berrien, ss. Richard Metcalfe being duly sworn deposes and says, that he is a physician and actually engaged in practice in the county above named, and that he has been so engaged for the period of ten years and —— months; also, that he is a graduate of Independent Medical College, a medical college located at Chicago, in the State of Illinois; that he attended said college for the period of one day during the examination and graduated therefrom February 4th, A. D. 1897. Deponent's present residence and place of business is St. Joseph in said county, and he belongs to the Physio-Medical School of Medicine. That he practiced under Dr. Hugons for a period of ten years. [Signed] Richard Metcalfe." This was subscribed and sworn to February 5, 1897. Now this leads the Supreme Court of Michigan to state that if it is able to say that a showing of attendance for one day only and the grant of a diploma by a so-called medical college does not constitute the fortunate recipient of such a certificate a graduate within the meaning of the law of 1887, it follows that on the face of the record of Berrien county this applicant was not legally registered. And it declares that it does say it, and that it follows that he was not entitled to the relief prayed.

# Societies.

## COMING MEETINGS.

AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., June 5-8.

American Academy of Medicine, Atlantic City, N. J., June 4.

American Medical Publishers' Association, Atlantic City, N. J., June 4.

American Medical Editors' Association, Atlantic City, N. J., June 4.

Association of American Medical Colleges, Atlantic City, N. J., June 4.

Medical Society of New Jersey, Atlantic City, N. J., June 4.

New Mexico Medical Society, Santa Fe, June 5.

American Association of Acting Assistant-Surgeons, U. S. Army, Atlantic City, N. J., June 6.

Rhode Island Medical Society, Providence, June 7.

Medical Association of Delaware, Rehoboth, June 12.

Massachusetts Medical Society, Boston, June 12-13.

Oregon State Medical Society, Portland, June 26-27.

Colorado State Medical Society, Denver, June 13.

Maine Medical Association, Portland, June 13-15.

South Dakota State Medical Society, Aberdeen, June 14.

Indian Territory Medical Association, Wagoner, June 19-20.

Wisconsin State Medical Society, Milwaukee, June 20.

Third District Branch of the New York State Medical Association, Binghamton, N. Y., June 21.

Second District Branch of the New York State Medical Association, Schenectady, N. Y., June 28.

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CONGRESS OF MIDWIVES.—The legislature of Finland has authorized the organization of a congress of midwives, which will meet at Helsingfors in June.

FAYETTE COUNTY MEDICAL SOCIETY.—At the recent meeting of this Society, in Fayette, Ind., May 8, Dr. A. R. Rogers of Oelwein was chosen president.

WORCESTER DISTRICT MEDICAL SOCIETY.—At the annual meeting of this Society, held in Worcester, Mass., May 9, the following officers were elected: president, E. R, Wheeler; secretary, L. C. Miller; treasurer, George O. Ward.

BRISTOL SOUTH DISTRICT MEDICAL SOCIETY.—This Society, at the meeting held in New Bedford, Mass., May 10, elected the following officers: president, W. A. Dolan; vice-president, M. H. Leonard; secretary and treasurer, A. J. Abbe.

HAMPSHIRE MEDICAL SOCIETY.—At the meeting of this Society, held in Northampton, Mass., May 9, the following officers were elected: president, J. A. Houston; vice-president, C. R. Gardener; secretary, J. C. Fahey; treasurer, A. H. Hoadley.

WASHINGTON COUNTY MEDICAL SOCIETY.—The members of this Society met recently in Washington, Pa., and elected the following officers: president, J. B. Irwin; vice-president, R. E. Connor; secretary, J. A. McKean; treasurer, W. R. Thompson.

LAKE COUNTY MEDICAL SOCIETY.—The members of this Society met in Hammond, Ind., May 9, and elected the following officers: president, John C. Pannenborg, Hammond, vice-president, Jas. T. Clark, Hammond; secretary and treasurer, Dr. Oberlin.

ADAMS COUNTY MEDICAL SOCIETY.—This Society met in Quincy, Ill., May 13. The new officers elected were: president, Otis Johnson; first vice-president, W. W. Williams; second vice-president, D. M. Landon; secretary, C. D. Center; treasurer, L. H. A. Nickinson.

ESSEX SOUTH DISTRICT MEDICAL SOCIETY.—The election of officers for this Society, which met in Salem, Mass., May 8, resulted as follows: president, P. L. Sanborn, Marblehead; vice-president, G. A. Stickney, Beverly; secretary, B. F. Sturgis, Salem; treasurer, G. Z. Goodell, Salem.

MIDDLESEX EAST DISTRICT MEDICAL ASSOCIATION.—This Association met in Woburn, Mass., May 9. The officers elected for the ensuing year were: president, J. P. Bixby, Woburn; vice-president, C. E. Chase, Woburn; secretary, E. S. Jack, Melrose; treasurer, Chas. Dutton, Wakefield. It was decided to celebrate the fiftieth anniversary in October.

MORRIS COUNTY MEDICAL SOCIETY.—This Society met in Morristown, N. J., May 8, and elected the following officers for the ensuing year: president, H. W. Rice, Port Oram; vice-president, N. H. Adsit, Succasunna; secretary, Levi Farrar, Middle Valley; treasurer, J. Douglas, Morristown.

ESSEX NORTH DISTRICT MEDICAL SOCIETY.—At the annual meeting of this Society, held recently in Lawrence, Mass., the following officers were elected: president, F. B. Flanders, Lawrence; vice-president, J. F. Croston, Haverhill; secretary and treasurer, M. D. Clark, Haverhill; corresponding secretary, J. A. Fitzhugh, Amesbury.

AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION.—This Association met in Richmond, Va., May 22-25. The annual address was delivered by Dr. J. Allison Hodges, and the following officers were elected for the ensuing year: president, P. M. Wise, New York City; vice-president, R. J. Preston, Marion, Va.; secretary and treasurer, C. B. Burr, Flint, Mich.

ARKANSAS STATE MEDICAL SOCIETY.—This Society closed a three days' session in Fayetteville, Ark., May 17. The following officers were elected: president, W. B. Lawrence, Batesville; first vice-president, L. Kirby, Harrison; second vice-president, M. L. Norwood, Sevier; secretary Frank Vinsonhaler, Little Rock; treasurer, R. C. Thompson, Pine Bluff. Hot Springs was selected as the next place of meeting.

WASHINGTON STATE MEDICAL SOCIETY.—The eleventh annual meeting of this Society was held in Spokane, Wash., May 8 and 9. The election of officers resulted as follows: president, P. W. Willis, Seattle; first vice-president, A. E. Burns, Republic; second vice-president A. E. Stuht, Colfax; secretary, A. H. Coe, Spokane; treasurer, J. W. Bean, Ellenburg. Eight new members were added and Seattle was chosen as the next place of meeting.

KENTUCKY STATE MEDICAL SOCIETY.—The forty-fifth annual meeting of this Society was held in Georgetown, Ky., May 8-11. The following officers were elected for the ensuing year: president, Jas H. Letcher, Henderson; first vice-president, Geo. E. Davis, Lawrenceburg; second vice-president, Geo. M. Reddish, Somerset; secretary, Steele Bailey, Stanford; treasurer, C. W. Aiken, Flemingsburg; librarian, Frank Lopsley, Paris. The Society voted to meet next year in Louisville, and chose Louis Frank, of that city, chairman of the committee on arrangements.

IOWA STATE MEDICAL SOCIETY.—The forty-ninth annual meeting of this Society closed a three days' session in Des Moines, May 18. There were 112 new members added, making the entire membership 800, about 450 of whom were in attendance. Davenport was selected as the next meeting-place, and the following officers were elected for the ensuing year: president, R. E. Cundiff, Sioux City; first vice-president, J. M. Ristine; Cedar Rapids; second vice-president, Frank Porterfield, Atlantic; secretary, J. W. Cokenower, Des Moines; assistant secretary, Geo. E. Decker, Davenport; treasurer, Geo. Skinner, Cedar Rapids. In connection with this meeting occurred the second annual meeting of the Social Society of Iowa Medical Women. Papers were read by Nancy M. Hill, M. A. Coveny, Margaret Colby, A. D. King, Jennie McCowen and others. The following officers were elected: president, A. D. King, Des Moines; vice-president, Mary A. Breen, Lemars; secretary, N. M. Hill, Dubuque; treasurer, Jennie McCowen, Davenport.

AMERICAN MEDICAL TEMPERANCE ASSOCIATION.—The tenth annual meeting of this Association will be held at Atlantic City, June 6, at the Hotel Dennis. This is the fourth largest association of medical men in the world the object of which is to study the alcoholic problem exclusively from the scientific side. The English association, called the British Medical Temperance Association, has a membership of over 600, exclusively medical men. Its president is Prof. Sims Woodhead, of Cambridge. The French society for the same purpose has a membership of 400. Its president is Dr. Motet, of Paris. The German society has for its president Dr. Mendell, of Berlin. It has a membership of over 300. The American society comes next with a membership of 150. Dr. N. S. Davis, Chicago, is its president and has been so from the first meeting held in Washington in 1891. The Swiss soci [illegible] formed.

with a membership of nearly a hundred. All these societies are composed of medical men who realize the magnitude of the subject and who address themselves without sentiment or theory to the study and discussion of the use of alcohol as a medicine and beverage. The French and English societies publish their transactions and papers in special journals. The American society issues the same in the form of a "Bulletin" published quarterly. The yearly meetings are held at the same time and place as the AMERICAN MEDICAL ASSOCIATION, for the reason that its members are almost exclusively also members of this ASSOCIATION. The annual meeting is for the election of officers, the presentation of reports, with *president's address*, some papers and discussions. The most of the papers bearing on this subject are presented in the different Sections of the AMERICAN MEDICAL ASSOCIATION. This is considered the most practicable, for the reason that a larger audience can be obtained and the papers will have more influence. The English society adopts this course with the addition of a medical breakfast at the British Medical Association meetings. This latter gives occasion for a free expression of opinion by all the leaders who are in sympathy with the movement. The necessity for the recognition and medical study of this subject becomes more imperative every year, particularly for authoritative studies by men of reputation. This Association should be a very great power in this country in directing public sentiment along these lines. A number of papers are promised at this meeting, and *an invitation is extended to every one interested to be present.* The session will be at 9 o'clock. Dr. T. D. Crothers, of Hartford, Conn., is secretary.

AMERICAN MEDICAL EDITORS' ASSOCIATION.—The annual meeting of this national association of American medical editors will be held at the Hotel Dennis, Atlantic City, N. J., Monday, June 4, under the *presidency* of Dr. I. N. Love, St. Louis, Mo. Dr. Dillon Brown, editor of *Pediatrics*, New York City, is secretary, and together with Dr. Philip Marvel, Atlantic City, chairman of the committee of arrangements, has been providing for this meeting, which will be attended by the leading medical editors of the United States, the majority of whom are members of the Association. A short business session will be held at 3 o'clock on the afternoon of June 4, and the regular meeting, for discussion of topics of interest to the members, will be co-incident with the annual banquet, which will be held at the Hotel Dennis at 7 o'clock in the evening. Topics of interest to medical journalists will be discussed by Drs. W. W. Keen, Philadelphia; J. M. Mathews, Louisville, Ky.; C. F. Taylor, Philadelphia; John V. Shoemaker, Philadelphia; Leartus Connor, Detroit, Mich.; Surgeon-General Walter Wyman, Washington, D. C.; Philip Marvel, Atlantic City, N. J.; Chas. Hamilton Hughes, St. Louis, Mo.; Dillon Brown, ew York City; W. C. Wile, Danbury, Conn.; L. S. McMurtry, uisville, Ky.; Kenneth Millican, New York City; Thos. Haw-ns, Denver, Colo.; Geo. F. Butler, Alma, Mich.; Wm. Osler, Baltimore, Md.; C. A. L. Reed, Cincinnati, Ohio; Windslow Anderson, San Francisco, Cal.; W. W. Potter, Buffalo, N. Y.; Chas. Wheaton, St. Paul, Minn.; Hobart A. Hare, Philadelphia; A. M. Phelps, New York City, and Nicholas Senn, Chicago. Five-minute addresses will be given by each of these gentlemen, who have been specially invited, and these will be followed by impromptu remarks from others present. The medical journalists of the United States are uniformly loyal to the AMERICAN MEDICAL ASSOCIATION, and a few years ago formed their organization under the name of the American Medical Editors' Association, which from the beginning has held its annual meetings the day before the regular convening of the AMERICAN MEDICAL ASSOCIATION. A symposium of rare interest is expected and every medical editor and *all* who are interested in the literature of the medical profession are cordially invited to be present.

INTERNATIONAL CONGRESS OF THE MEDICAL PRESS.—The medical press of France has organized a congress as already announced, summoning the representatives of the medical press at home and abroad to a general reunion immediately before the opening of the International Medical Congress. Baudouin of Paris, and Posner of Berlin, have been working since 1894 to organize an international association, and it was proposed at the Rome congress to have a section for the medical press in future international congresses. A provisory international committee was appointed to report at the Moscow congress, but nothing substantial has been accomplished. "The example of the international reunions of the lay press has demonstrated the great benefits to be derived by our profession from a general agreement on a certain number of points in which all are interested. An international association would promote the legitimate influence of medical journalism on the medical public, enhance the value of scientific literature, assist in the organization of periodical congresses and be found useful in many other ways." The chief questions to be discussed at the sessions are the foundation of an international association and the application of the principles of the protection of literary property to the protection of medical literature. Addresses on these subjects by Laborde (*Trib. Méd*, Paris), Posner (*Berliner Klin. Woch.*), Rubino, De Maurans (*Semaine Méd.*, Paris), and Rochet (lawyer of the French Ass. de la Presse Méd), are to be distributed to the members before the congress opens. Other questions to be discussed are: "Unification of Technical Terminology for Bibliographic Privileges Allowed the Lay Press;" "Regulation of the Right of Reproduction;" "General Conditions of the Service of Exchanges Between Journals;" "Representation of Medical Journals in Foreign Lands;" "Rôle of the Medical Press in the Organization and Promotion of Congresses, etc." The dates of the congress are July 26 to 29, the membership fee $5 for titular and $2 for adherent members. Secretary, Dr. Blondel, rue de Castellane 8, Paris.

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## Illinois State Medical Society.

*Fiftieth Annual Meeting, Springfield, May 15-17, 1900.*

*(Continued from p. 1335.)*

### COMPLICATIONS AND SEQUELAE OF SCARLET FEVER.

DR. M. S. MARCY, Peoria, read a paper on this subject, in which he said that the complications of this disease are to be dreaded, owing to a lack of a positive antagonist to the streptococcus. He pointed out the necessity of carefully watching the patient after the acute symptoms have subsided, for fear that complications may set in, and some of them were discussed. He gave the history of a very severe case with all the complications, following a mild attack. According to his observations, they are apt to be worse in children, who inherit weak constitutions from parents who have suffered from syphilis and tuberculosis; and especially those of old fathers.

### TENDENCIES OF MODERN MEDICINE.

DR. H. N. MOYER, Chicago, considered this subject in his annual address. In speaking of the medical practice act, he said that physicians are not benefited by it, but the public is, while it is for the protection of the public health that laws are passed; and that the interest physicians feel in legislation is no more and no less than that any class of citizens ought to feel in having good laws passed and in seeing them properly enforced. It is sometimes questioned whether or not physicians should descend into the arena of practical politics in order to secure such legislation as is necessary. If not done in a sense of pique, because their advice is not sought, but simply in an advisory capacity, their influence is great. This kind of legislation is increasing, developing from natural causes, because medicine is rapidly becoming an exact science. One of the tendencies of the near past, in the development of modern medicine, is an increasing confidence in and a reliance on scientific medicine on the part of the public.

Referring to "Christian Science," he said that it does perform cures, but by suggestion, a well-recognized method of treating diseased states, and one employed by physicians in suitable cases. In so far as the method happens to be applicable to a particular case, the results are brilliant, but when "Christian Science" deals with an infectious case, or organic disease, then the consequences may be deplorable. He thinks that the physician need do nothing legally, with the "Christian Scientists." Education is the remedy for "Christian Science,' and medicine has nothing to fear from such fads as faith healing, magnetic physicians or miracle mongers.

He further said that the increasing exactness in medical science is exerting a powerful influence on medical education, but by some it is believed that the effect is reversed, and by the influence of medical education the science is being created. The use of methods and instruments of precision, whenever they become at all general, must find their reflex in the medical curriculum. He contrasted the medical college of his student days with that of to-day. Progress has been rapid, and the laity is rapidly recognizing the importance of scientific precision, while the physician who does not use the numerous aids at his command to-day soon finds himself out-classed. The material rewards for special skill in the medical profession have increased, as is witnessed by the salaries paid eminent surgeons in the South African War, and this reflects the judgment of the public as to the value of such medical services. The outlook of the immediate future for the beginner in medicine is not bright. There are too many medical men, but this is true of all lucrative occupations. There is a constant adjustment, and the law of supply and demand must ultimately govern; as the standard of medical attainment is raised, and the cost of getting a medical education is increased, the supply will diminish. The real problem before us is the exclusion of those who are not properly equipped mentally for mastering the deeply intellectual problems of medicine.

The crowning glory of the present century is the control of epidemic disease. The problem of infection in typhoid, tuberculosis and malaria has been mastered. If scientific medicine had nothing but this to its credit, it would take first rank among the beneficent sciences. The next great assault will be against consumption. The value of special climate in the treatment of this is doubtful, but in most cases a cold, dry air is best, and freedom from dust the most important consideration; these conditions can not be found in large towns or cities, and only a small proportion of consumptives can go any considerable distance, but they must be in the country, and we must have the aid of the country practitioner. For years the country doctor has seen many of his patients going to the cities for operations and treatments, content with the thought that perhaps they received better service than he could give them, but if tuberculosis is to be overcome, it must be with his aid.

He referred to medical organization, legislation, education, and the expansion of the public health service, and said that the medical profession is not doing its fair share of government in this country. In Europe medical thought has been of preponderating importance; in France the Chamber of Deputies has more physicians than lawyers; the same is true of the Reichstag of Germany, and the only antagonist whom Bismarck feared and respected was Virchow, who for twenty-five years was one of the leading legislators of Germany; this is true also of Italy, where Baccelli was for years the leader of a great political party, and at the same time a great teacher and master of clinical medicine. The legal profession has too long dominated the scene, and if to attainments in this line is added the glint of soldier straps, the result seems quite irresistible. The combination of soldier-judge, or lawyer-colonel, seems to be as inherently entitled to rule this country as are the dukes and princes in the Old World. Medical men know how poor legal and military training is for the comprehension of sociologic problems, and that no class or profession is so competent to deal with these topics as is their own. In the main, the world is indebted to the medical profession for all of its scientific knowledge in regard to criminals and the defective and dependent classes; yet government, 80 per cent. of whose operations are concerned with these classes, is controlled by lawyers, who have a sprinkling of military experience. Another age will look back on this, and, with the perspective of years, wonder why the intellectual advancement of our times was not represented in government.

### ADDRESS IN STATE MEDICINE.

Dr. Arthur C. Cotton, Chicago, delivered the address of this section, using for his subject, Jeremiah, xxxi, 15: "Thus saith the Lord: A voice was heard in Ramah, lamentation and bitter weeping; Rachel weeping for her children, refused to be comforted for her children, because they were not." The historic aspects of pediatrics were considered and reference made to a book devoted to children, which was written by a lay woman in 1790, and called "The Maternal Physician."

All recognize that the mortality of infancy and childhood is enormous. More than two-fifths of the whole number of deaths in England and Wales during the decade of 1881-1891 occurred in children under 10 years of age. The greater number of these were under 5, and still more under 1 year. Recent studies—by Eross—of sixteen large European cities, including a review of a million and a half of children, have shown that 10 per cent. of infants born alive die during the first four weeks of life. Independent work in New York along the same lines brought very similar results, namely, a proportion of 1 death to every 10.8 births. The lowest average infantile death-rate to any European country is found in Norway, where we may expect to find, of 1000 births, 900 infants still alive at the end of one year. Only in the most favorable portions of other countries—the rural districts—are nine infants out of ten born able to keep up the struggle for life. In the larger cities the mortality during the first year is found to range from 120 to more than 700 in 1000 births.

The relation of the physician to over 90 per cent. of the disorders of infancy and childhood, may be summed up in the one term, "hygiene," and the conscientious practitioner will agree that the measure of his success bears a direct ratio to his application of the principles of this all-important subject. Among the obstacles to be overcome in this, two things particularly stand in the way: 1, there is either a want of information on the part of the physician, or a disinclination to apply his knowledge; 2, there is unwillingness of the mother to be guided in this respect.

The convention of child study, which was recently held in Chicago, revealed that systematic experimental observations on a large number of children of different ages have been instituted in some of the public schools, with the result that exceedingly interesting and valuable data have been obtained by Gilbert of New Haven, Porter of St. Louis, and W. S. Christopher of Chicago. In the latter city, as in some others, a more or less systematic, though limited, medical supervision of the pupils has been inaugurated, which during the past winter has shown positive results in checking the spread of acute contagious diseases, and also benefited in many other ways the pupils thus inspected. As a partial result of these investigations, the conclusion has been reached that our boasted school system may prove a great evil, if not properly guarded. The public school is recognized as a great juvenile board of trade, where exchange of infection and their products may be affected, and contagion disseminated. The question of hygiene and the individual pupil should find a response in every intelligent parental mind. Aside from dangers of contact infection, the question of injury to the individual pupil by the ordinary schoolroom régimen is a subject worthy of careful study; and the wrecks, physical and mental, that strew the pathway of life but emphasize the need of more definite knowledge. It is now accepted that many children, generally recognized as able-bodied, can not be subjected to the routine of school life without positive injury to themselves, if not to their associates, and that defective hearing, vision, tactile sense, as well as hemic, secretory and excretory faults unfit many children for the modern schoolroom. He believes that no child should be admitted to any grade in school without a medical certificate from a competent examiner, and he discussed the propriety of state legislation looking toward such medical supervision of pupils in our public schools.

### PATHOLOGY OF DELIVERY.

Dr. J. Clarence Webster, Chicago, made the address of the section on surgery, with this as his subject. He first considered anomalies of the hard passage, and under this head included all variations from the normal type of bony pelvis, naming as the most frequent contractions met with in practice: the justo-minor or universally contracted pelvis, the flat non-rickety and rickety, the funnel-shaped, and the pelvis altered by various spinal deformities. Of the latter, perhaps the most common are the universally contracted and the flat. Reference was made to the use of forceps, the axis-traction instrument and not the ordinary long forceps, and to the value of the Walcher posture. The indications for the use of axis-traction forceps were discussed and, in a general way, the conditions in which the instrument should be employed: 1. In delayed labors due to *a*, faults in the powers—1, essential—the uterus; 2, accessory muscles; *b*, faults in the passenger—1, slight enlargement or marked ossification of the fetal head; 2, certain malpositions and malpresentations; *c*, faults in the passages—1, soft parts; 2, hard canal. 2, In dangerous labors due to *a*, maternal complications, viz., heart disease, pneumonia, etc.; *b*, fetal complications, viz., some cases of prolapsus funis, dry labors, etc.

The chief indications for performing version were given as follows: 1. Maternal: *a*. Accidental hemorrhage and placenta previa. *b*. Eclampsia and other conditions where a hurried delivery is considered necessary. *c*. Flat pelves. 2. Fetal: *a*. Transverse presentations when the conditions are favorable. *b*. Prolapse of the cord in the first stage. *c*. Brow and face cases when the head has not engaged, if it is impossible to change them into vertex cases.

Symphysiotomy is best regarded as an adjuvant to delivery by the axis-traction forceps. It may, therefore, be employed, speaking generally, where forceps delivery in the Walcher position is impossible, and where there is no doubt that the increased pelvic measurements resulting from the operation will allow the head to be extracted. It may be tried: 1. In cases of pelvic contraction. Most authorities mention a limit of 2.6 to 3.2 inches in flat pelves, and 3.2 to 3.9 inches in justo-minor ones. It is evident that the employment of the axis-traction forceps in the Walcher position must make unnecessary, in a considerable proportion of cases, the cutting operation. 2. Symphysiotomy also has a place in impacted brow and face cases, where delivery can not be safely carried out with axis-traction forceps in the Walcher position. 3. In cases where the head is abnormally ossified or a little enlarged, and delivery can not be effected by the axis-traction forceps and the Walcher position, symphysiotomy is indicated.

The indications for Cesarean section, and also for the Porro-Cesarean section were mentioned. The latter should be employed: 1. Where the patient is particularly anxious not to run the risk of a second pregnancy, owing to the impossibility of delivery through the vagina. 2. Where the uterus or appendages are so diseased as to render probable the necessity for a subsequent operation. 3. Where owing to a prolonged labor, in which other manipulations have been tried, infection of the uterus has occurred.

In speaking of the indications for embryotomy, he said that in view of the modern improvement in the technique of abdominal surgery, whereby the mortality of Cesarean section has been greatly reduced, a physician takes upon himself a grave responsibility where he recommends the destruction of the living child.

### APPLICATION OF FORCEPS.

Dr. **J. E. Allaben**, Rockford, considered this subject. He said that the forces which are responsible for the origin and evolution of the obstetric forceps may be designated under two general heads: the evolution of the human family to its present stage in civilization; and the individual deviation in structure or function, either in parent or fetus, from a certain type which is designated as normal. The obstetric forceps in the hands of the skilful is a device capable of saving life and curtailing pain; in the hands of the unskilful, it has done great harm. The essential features in a forceps are that they should be aseptible; should have the proper cephalic and pelvic curve; should be rigid enough to prevent slipping, and should be so constructed that traction can be applied as near as possible in the direction of the axes of the pelvic planes. He recognizes three varieties, the long, short and axis-traction, and spoke of two things that should be remembered in inserting the blades—the curve of the child's head, and the curve of the mother's pelvis.

He divides the operations of forceps applications into low, medium, and high. Under low, he recognizes the following divisions with reference to position and presentations: 1, occipito-anterior; 2, occipito-posterior with partial rotation; 3, occipito-posterior; 4, face presentation; 5, breech presentation. These positions and presentations were taken up and discussed in consecutive order.

### TECHNIQUE OF VERSION.

Dr. **J. F. Percy**, Galesburg, read a paper on this subject. He said that an important preliminary aid to the final success of version is an exact diagnosis of the relation of the fetus *in utero* to the maternal parts. This will require either abdominal palpation, a vaginal examination, or both combined. Version should never be attempted in a pelvis where the conjugate vera is less than 9 c.c. Another very practical aid is examination of the prospective mother by abdominal palpation every two weeks after she has advanced beyond the seventh month of pregnancy. Since version belongs to the domain of surgery, the physician should prepare for it as for a capital operation.

### MANAGEMENT OF IMPACTED CASES.

Dr. **Henry F. Lewis**, Chicago, discussed this subject. He defined impaction as that condition in which the presenting part is stuck fast in the maternal passages, neither advancing with the pains nor receding in the intervals. The presenting part of the fetus wedged in the pelvic canal renders the soft parts anemic by pressure, which, if continued long enough, causes necrosis. At the same time, the pressure interferes with the circulation of the parts in the canal below so that they become swollen and edematous. The worst feature of the case is that the labor becomes indefinitely prolonged and can not be terminated unless the pains greatly increase in their intensity, or assistance is furnished. He considers impaction as limited in causation to a disproportion between the bony canal and the presenting part; and does not think that dystocia is due to tumors, cicatrices, etc. Of all parts of the fetus the head is most prone to impaction. With a normal position of the vertex, impaction may occur in any portion of the pelvic canal on account of smallness or deformity of that canal, or on account of largeness of the head. Careful examination and mensuration before labor will often reveal the disproportion between head and canal and enable the obstetrician to take measures which will forestall trouble. In impaction of the presenting part of the fetus within the pelvic canal, traction with forceps or otherwise should first be tried, except in cases of monstrosity or in transverse shoulder presentations, in which cases embryulcia is the proper resource. If justifiable force with traction fails to move the fetus, symphysiotomy remains, if the child is living, and a mutilating operation if the child is dead.

### MUTILATING OPERATION IN OBSTETRICS.

Dr. **Charles S. Bacon**, Chicago, discussed this subject. He said that these are generally indicated in cases of obstructed labor in contracted pelves where the child is dead. Obstruction in the soft parts, for example, incomplete dilatation of the cervix, or stenosis of the vagina or vulva, due perhaps to scar formation, may sometimes furnish the indication. The perforation or decapitation of the living child is becoming less frequent as the result of high forceps operations; Cesarean section and symphysiotomy are improved, yet it is not possible to make a rule condemning the operation in every case. Among the most urgent conditions which call for interference and determination or decision for perforation or decapitation, as the case may be, is the distension of the lower uterine segment. He is confident that this condition is often overlooked by many physicians, and emphasizes its importance. The recognized indications for decapitation are impaction, in a case of neglected cross-presentation, or a dangerous distension of the lower uterine segment. To these indications he added one that, so far as he knows, has not been acknowledged, namely, a serious contamination of the presenting arm.

### SYMPHYSIOTOMY.

Dr. **George N. Kreider**, Springfield, read a paper on this subject, in which he quoted the indications for this operation as mentioned by Dr. Webster. He also quoted from the paper of Dr. E. A. Ayers, of New York, regarding the subcutaneous operation, as follows: 1. Secure full dilatation of the cervix before beginning the operation, if possible, without risk to the child. 2. Have the urethra and bladder held to the left with a sound. 3. Make the initial incision with a small scalpel, aiming to cut a path upon the face of the symphysis for a probe-pointed bistoury that is to follow, keeping the scalpel close to the bone and under the clitoris. 4. Substitute a probe-pointed bistoury for the scalpel after introducing the index finger of the left hand into the vagina against the posterior edge of the symphysis up to the top, and bring the tip of the finger and the tip of the bistoury together at the top of the joint, then work the blade downward with the left finger accompanying it, to within one-fourth inch of the subpubic arch. Then take out the bistoury, invert it, and cut from below up to the separated part, thus avoiding injury to the bulbi vestibuli just beneath the joint. 5. On removing the knife, the joint having separated, have an assistant press a pad of bichlorid gauze over the wound and face of the joint, keeping it there until the child is delivered. This will prevent hemorrhage and lessen the liability to infection. He then gave a description of the Ayers hammock bed, and a tabulated statement of seventeen cases of symphysiotomy, three of which he performed.

### CESAREAN SECTION AND PORRO'S OPERATION.

DR. CHAS. B. REED, Chicago, discussed this subject. He said that the indications for Cesarean section are usually divided into absolute and relative; absolute when there is no alternative and delivery can not be effected, and relative when there is a choice between this and other procedures. The absolute indications are: 1. Contracted pelvis; flat pelvis with conjugate vera 6.5 cm. and child living; general contracted pelvis, 7 to 7.5 cm. or pelvis with 5.5 cm. conjugate vera and child dead. 2. Presence of large bony growths in pelvis. 3. Extreme atresia of lower genital tract, either congenital or acquired. 4. The occurrence of a grave accident in labor, as rupture of uterus, or sudden maternal death. 5. Carcinomatous degeneration of cervix or vagina.

The relative indications are more difficult to formulate, and usually must be determined according to the requisites of each case. As to the time of operation, it may be performed either before or during labor or after the mother's death. As an operation of election, the most desirable time under any of the absolute indications is at term, or when the labor pains begin.

For the Porro operation the indications were classified thus: 1. All cases where, owing to the general conditions, Cesarean section is indicated and the removal of the uterus is required. 2. When the child is dead, and infection of uterus has taken place. 3. Extensive atresia of vagina, preventing discharge of lochia. 4. Carcinoma of cervix. 5. Atony uteri or uncontrolable hemorrhage from placental site. 6. In cases of ruptured uterus where suture is unsafe.

The Porro operation has been expanded to include all operations which terminate in the supravaginal amputation of uterus. The advantages of this method over the conservative operation lie in the rapidity of the work, but more in the prevention of hemorrhage post-partum and the diminished chance of infection.

The Duhrssen vaginal Cesarean section presents a new phase of the question, and he advocates this operation in: 1. All abnormalities of cervix uteri and lower uterine segment which render dilatation difficult or impossible—carcinoma, myoma, rigidity, stenosis, etc. 2. Danger to the mother, which the rapid emptying of the uterus will relieve, disease of heart, kidneys and lungs. 3. Conditions of danger to the mother which presumably will cause death. The operation has been done 11 times, with 3 deaths.

### PERINEAL OPERATION IN THE MALE, AND VAGINAL INCISION IN THE FEMALE, FOR THE RESULTS OF APPENDICITIS.

DR. E. M. SUTTON, Peoria, read a paper on this subject. He does not advocate perineal or vaginal incision for all cases, but in those where the surgeon can determine that it is the shortest route into the fecal abscess, for the following reasons: 1. Abdominal pressure, so necessary to bowel action after operations within the abdomen, is not interfered with as it is when multiple incisions with the Mikulicz drain are employed. 2. Drainage is downhill, and from the most pendant fossa instead of uphill through the abdominal walls, where vomiting may dislodge the tubes or interfere with perfect drainage. 3. The danger of interfering with the more or less successful attempts of the peritoneum to combat the infection is minimized instead of increased as it is by entering from above.

### ANKLE SPRAINS.

DR. EDWARD H. OCHSNER, Chicago, described and demonstrated a method which consists in careful and systematic strapping with rubber adhesive straps. These are cut from one-half to three-quarters of an inch in width, and the proper length. If a small ankle, they should be one-half inch wide; if a large one, they may be three-quarters of an inch, but no wider; on this and on the accuracy with which they are applied depends the success of the method. If the straps are too wide, or if they are applied in a haphazard manner, failure is sure to result. The foot is held at slightly less than a right angle and a trifle everted, the former element in the position is observed because it is easier to walk on a painful ankle if it is held slightly in the calcaneum than if held in the equinus position; the latter element is observed because ankle sprains are usually caused by a sudden inversion of the foot, thus injuring the external ligaments, hence slightly everting the foot relieves the tension of these ligaments and places them at rest. With the foot in this position, one end of a long strap is applied to the inner surface of the foot near its posterior end, and brought under the heel and up on the outer posterior surfaces of the leg to within a few inches of the knee. At the lower end this falls into the depression just posterior to the external malleolus. A shorter strap is now applied by placing one end to the inner surface of the heel near the sole of the foot, then bringing it around over the tendo-Achillis to the outer surface of the foot, making it cover the first strap at a right angle and passing along parallel to the under border of the sole of the foot, then over the dorsum of the little toe. Another long one is then applied, anterior to the first, overlapping it about one-third of its width; then a short one, and so on alternately until the outer anterior aspect of the ankle is reached. Over all this a hard-rolled bandage is carefully and snugly applied. The patient is directed to lie still with the foot elevated until the warmth of the body has caused the plaster to adhere firmly. In a great majority of instances the patient can walk, with reasonable comfort, after a few hours.

He reported four cases from among the number he has treated, because they illustrated four different classes. The treatment of ankle sprains by this method he has found eminently satisfactory.

### CHOLELITHIASIS.

DR. J. W. HAIRGROVE, Jacksonville, read a paper on this subject. He said that the present state of pathology concerning the development of gall-stones indicates that two conditions are requisite for their formation, namely, the presence of obstruction to the free flow of bile from the gall-bladder or the biliary ducts, and the infection of these organs by a variety of attenuated micro-organisms, capable of inducing a subacute inflammation of the mucous membrane of the affected structure.

He discussed the importance of diet as an etiologic factor in the causation of this disease, and narrated three instructive cases, one of which presented the ordinary symptoms of gall-stones.

### PRESENT TREATMENT OF SYPHILIS.

DR. WM. ALLEN PUSEY, Chicago, read a paper on this subject. He said that total excision of the chancre, or destruction by thorough cauterization very early, has strong theoretic grounds in its favor, and may be done in suitable cases; but that they are relatively few, for the reason that they do not come to the physician soon enough. If there is to be any hope of aborting the disease *in loco*, it must be done before the contiguous lymphatics are involved.

The treatment of the primary period should be confined to the local lesion, and such general measures as will prepare the patient to best support the onslaught of the disease. In cases of mixed infection the lesions may be treated by various vigorous antiseptic methods. Methods in point were described. The constitutional treatment of syphilis involves the management of the patient's general condition and the effective use of mercury, and to a less important degree the use of the iodids. In regard to how long the constitutional treatment of syphilis shall continue, he said that the tendency among syphilographers is constantly to increase the period; and bearing in mind that the duration of active secondary syphilis is at least from six months to a year, active specific treatment should continue at least this long. The weight of opinion is for at least two years' thorough treatment. Clinical experience leaves no doubt of the efficacy of inunctions in the treatment of this disease. The organism can be promptly and surely brought under the influence of mercury by inunctions, and as an ally to the administration of mercury by the mouth it is a method of the utmost value. Injections of mercurial salts are preferably made over the gluteal region, and should be made up, the needle being driven in at right angles to the surface up to the base.

### HEMORRHAGE OF THE BRAIN.

Dr. C. Dewey Center, Quincy, reported a case of multiple, terminal twig hemorrhage of the cortical system of the right side of the brain, followed by transient left hemiplegia, petit mal, and later by generalized convulsions. Operation was resorted to and recovery of the patient followed.

### INTESTINAL OBSTRUCTION.

Dr. A. Goldspohn, Chicago, reported two cases of intestinal obstruction following vaginal hysterectomy, and one after pelvic abscess, with a secondary operation in each case, and concluded with the following observations:

1. According to Lenclos, ileus is more frequent after vaginal hysterectomy than after other abdominal sections. This is chiefly in all cases in which the abdominal or pelvic cavity is not closed; for in these two or three of the chief causes of peritoneal adhesions are quite generally present, i. e., a raw surface, infection, and a foreign body—the drain.

2. Inasmuch as it is known that the physiologic economy of the abdomen demands that the different portions of the small intestines shall be free to migrate from place to place, any opening of the abdominal or pelvic peritoneal cavity is deplorable if it engages any portion of the small intestine to assist in closing the opening or wound. This is regularly the case in vaginal hysterectomy, as ordinarily performed, and as is *necessarily done in all cases of this operation where there* are extensive abraded surfaces, or where septic features are present. But in all other cases of this operation where no intraperitoneal cavity is needed, it is a just requirement that the peritoneal cavity be closed by a closure of the wound in the peritoneum by coaptation of its edges; and that the use of hemostatic forceps or clamps, as far as it interferes with such closing of the peritoneum, should be avoided as far as possible.

3. Secondary operation for the relief of post-operative ileus, to be successful, must be performed before the mechanical obstruction has caused infection and paralysis of the bowel—peritonitis.

4. When this difficulty arises early—within three to four days after an abdominal or pelvic operation, i. e., the time in which post-operative peritonitis can also be expected, it is often difficult to exclude the latter, which also causes similar symptoms.

5. Symptoms and signs which speak mostly for ileus are: Abdominal distension without marked tenderness to touch or gentle pressure; the presence of rhythmical colicky pains; a slow pulse that is not wiry; fecal vomiting; vermicular motion of small intestines, seen or felt through the abdominal wall; increased proportion of indican in the urine.

### SENILE ENLARGEMENT OF PROSTATE.

Dr. F. Kreissl, Chicago, discussed "The Treatment of Senile Enlargement of the Prostate, with Especial Reference to the Galvano-Caustic Radical Treatment." He divided the surgical procedures into three groups: 1. Methods of cysto-drainage—suprapubic, perineal, or rectal. 2. Methods of indirectly aiming to reduce the size of the prostate, the so-called sexual operations, like vasectomy, angioneurectomy, and castration. 3. Methods directly striking the obstruction at the vesical neck, like prostatotomy, prostatectomy, electro-cauterization, and the galvanocaustic incision, or, as it is better known, Bottini's galvanocaustic radical treatment of senile enlargement of the prostate.

He reported several instructive and interesting cases, and concluded with the following statement: "From what we know to-day we can safely say that the galvanocaustic radical treatment of senile hypertrophy of the prostate is a well-established fact, and is supported by a great many promising and reliable reports of eminent investigators. It is reserved for the near future to collect and conscientiously scrutinize the results of practical experience, from which a permanent edifice will be constructed."

*(To be continued.)*

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## Denver and Arapahoe Medical Society.

*May 8, 1900.*

### DISEASES OF THE BLADDER AND THEIR DIAGNOSIS.

Dr. W. P. Munn classified diseases of the bladder from the standpoint of anatomy, physiology, urinology and bacteriology. He said that for convenience in clinical study, it is well to investigate every case of disease of the urinary organ systematically and seriatim from each of these standpoints, finally basing diagnosis on the composite picture that results therefrom. He said, also, that it is well to determine first whether the act of urination is unduly frequent, by having the patient state definitely the number of times and the hours at which he urinated during the day and night preceding the inquiry, as well as the quantity voided each time. Frequency may be due to diabetes, diuretics, drinking large quantities of fluid, or use of some special article of food. It may also be associated with diminished total excretion of water and increase of soluble solids.

Urine that is normal in specific gravity and abnormal in anatomic elements demands careful study to determine the source of the trouble. Pus when present in the first part of the urine passed, presenting the well-known *tripperfaden*, owes its origin to the urethra; when present in the last portion, it is evidence that it comes from the bladder; when mixed with the whole urinary excretion, it may come from either bladder, urethra or kidney. "Urgency" often exists without disease of the bladder. In young men it is often due to gonorrheal, deep urethritis, septic, typhoid, tubercular or diet infection. In the female, often frequent urination of urethral origin has been attributed to the bladder. This is especially the case in unmarried women. A patient who has been under the care of one of the most eminent surgeons in New York and irrigated almost continuously for about a year without benefit, on examination was found to have a dense cicatrix about one inch in length, that obstructed the passage. Four long, deep incisions were made and dilators introduced daily, and improvement was rapid. The stricture was the result of a contracting tubercular ulcer, as the patient had previously suffered from pulmonary tuberculosis.

There may be utter absence of clinical symptoms pointing to the kidney, yet, as a matter of routine, every difficult case should be subjected to examination by either the urine segregator, the cystoscope or the urethral catheters. As examples of the necessity for such examinations, he cited cases.

Following the consideration of frequency, there should be an inquiry as to the presence or absence of pain, its location, character, frequency and severity, the time of its occurrence and its coincidence with other signs and symptoms. Reflected pain in other parts of the tract often occurs. One of his patients suffers from persistent pain at the fundus of the bladder, which is evidently due to an old deep urethritis, since it disappears as if by magic when a solution of eucain or cocain is instilled into the prostatic urethra.

Every case of hematuria demands early and thorough examination, and physical inspection of the external organs must be a part of the examination.

### EVASION OF THE COLORADO MEDICAL STATUTE.

Dr. L. D. Van Meter called attention to a few salient points relative to the open evasion of the medical statutes by the very class that such statutes were enacted to prohibit. The interpretation of the statute by Judge J. Ebert, in his decision from the Supreme Court of Colorado in the case of Harding vs. The People, is as follows: "The provisions of the act show beyond any question that the clear intention of the legislature was to require all persons desiring to practice medicine or surgery within this state to apply for and receive a certificate of qualification from the State Board of Medical Examiners."

The following questions naturally arise: How do they escape persecution? How do they evade the law? They do so by putting forth the silly, threadbare plea that they are not practicing medicine or surgery, and use or prescribe no drugs. The statute reads: "Any person shall be regarded as practicing medicine within the meaning of this act who shall profess publicly to be a physician and prescribe for the sick, or shall attach to his name the title of 'M.D.' or 'surgeon' or 'doctor' in a medical sense." Take for example an osteopath, who has the presumption to follow his name with "D.O." and who claims he is not practicing as an "M.D.," "surgeon" or "doctor" in a medical sense, as he is not prescribing drugs; when he openly professes to cure disease by manipulation, and goes into our courts and testifies that osteopaths are graduated doctors of a new school of medicine, how can it be possible that any court would rule they are not "to be regarded as practicing within the meaning of this act?" Is not their use of the word "doctor," using it in a medical sense? Are they not prescribing for the sick when they direct that an inflamed joint be rubbed or manipulated? Or when they, as one of them recently testified under oath, treat a case of disordered stomach after a debauch by locating the pneumogastric nerve in the neck," desensitizing" this by rubbing and manipulation, setting free the pent-up nerve-force in "nature's drugstore—the brain—and thereby curing the malady which he considered so dangerous to life that he deemed it advisable to call in a licentiate of the state board as a consultant. What is the remedy? Dr. Van Meter suggested the starting of criminal proceedings against the osteopaths in order to test the law. For if any one file information, sufficient in the judgment of the district attorney, that any one is violating a state statute, he is bound to enter indictment against such violator without cost or trouble to the informer.

## Kings County Medical Association.

*May 8, 1900.*

H. Arrowsmith, M.D., President.

### MERGES INTO THE STATE ASSOCIATION.

Before taking up the scientific program, the president announced that there was very important business before the Association for its consideration, i. e., the question of its union with the New York State Medical Association as a subordinate county association.

Dr. J. C. Bierwirth, a member of the council of the state association, then described the obstacles that had been surmounted in securing the new charter for the state association. A great effort, he said, had been made toward unification and peace. The proposed coalition would give a state association of about 1200 members. In addition to the many adantages that must accrue from greater unity and strength, it was hoped that in time the members would also receive a mortuary benefit. Dr. Bierwirth then moved the adoption of the following resolution:

Resolved, That the Kings County Medical Association affiliate with the New York Medical Association in accordance with the dictum of the new charter.

Dr. J. D. Rushmore at first objected on the ground that this proposed action seemed to him like an abrogation of local rights and government, but after some further explanations by Dr. Bierwith and by Dr. Squibb, the resolution was unanimously adopted.

### ENTEROPTOSIS.

Dr. Joseph F. O'Connell read a paper on this subject. He said that Glenard, of Lyons, France, had written extensively on this and recognized it clinically as accompanied almost invariably by a specific form of dyspepsia. Anatomically the ptosis generally occurs in the following order—first the stomach, then the intestine, the right kidney, the left kidney, and lastly, though rarely, the liver and spleen. Its etiology embraces a number of factors. The normal curves and pouches of the gut are predisposing factors, as is likewise an abnormal mobility of the tenth rib. Other factors are abnormal attachments, in fact, anything causing diminution of abdominal tension. First among the exciting causes is trauma, and next come oft-repeated pregnancies. The speaker said that Stiller would discount these factors, and place far ahead of them in importance the so-called "costal stigma." This is the mobility of the tenth rib already alluded to. Meinert, of Vienna, on the contrary, after an exhaustive study of several hundred bodies, makes the statement that this sign is of little or no value. Among the more important objective symptoms are: a flat stomach, sensitiveness to pressure near the tenth rib, a cord-like transverse colon, which crepitates under pressure, and through which the pulsations of the aorta can be distinctly felt, a displacement of sigmoid and cecum, a prolapse of because these hours correspond in general to periods of duod-erance of the stomach to milk he has long regarded as of great diagnostic importance, as is also the presence of nervous crises, hysteria, wakefulness and despondency. These symptoms, though vague, may be regarded as links in the vicious chain. Pain and fatigue at 3 p.m. and at 2 a.m. are important because these hours correspond in general to periods of duodenal digestion. The treatment comprises bandaging, the use of laxatives, alkalies, hydrotherapy, exercise, and, in women, the correction of intrapelvic displacements.

Dr. Jacob Fuhs, in discussing the paper, spoke first of the etiology, with special reference to the so-called "costal stigma." In his cases of enteroptosis, he said, it is not unusual to find at least three floating ribs, and often the ninth seems very loose. Another factor considered was the lack of power of the abdominal muscles. This seems important. He does not believe corsets exert any evil influence, for he has seen many Swedish girls who have never worn them, victims of enteroptosis. More important than any or all of these are severe diseases, particularly typhoid and diphtheria, which by producing long-standing malnutrition in the musculature, awake kindred changes in the ligaments, which may result in a permanent stretching. This condition might be induced artificially by a too rapid obesity cure. The speaker here related a case in point. Certain occupations, particularly those in which people occupy one position for hours at a time, predispose to enteroptosis. Last, but not least, among the etiologic factors mentioned, were oft-repeated pregnancies, and all conditions tending to lessen the firmness of the pelvic floor. As usual, prophylaxis is more important than cure. Particularly after all acute diseases, as well as after pregnancy, is it necessary to examine all the organs, and especially the abdominal muscles. There is a crying need for this care in children, for whom on the discovery of the very first suggestion of enteroptosis the recumbent position for hours during the day should be required. The diagnosis is difficult because of what might be called the normal displacement of organs. For example, the place interchange of cecum and sigmoid is frequently observed with no evil results. In like manner, the sigmoid might often be double, while the great part of the colon might sink to the brim of the pelvis. Inflation, as a diagnostic aid, is very valuable, but touch is better. Dr. Boas has followed a metallic capsule with the X-ray, but such a method is obviously not within the reach of most practitioners. Peristalsis often helps, for these patients are generally extremely emaciated. He is not in favor of catharsis, relying on enemata when necessary. He gives strychnia for the atonic form, and hydrastis for the spastic variety. Bandages, as usually applied, do more harm than good. They must not be allowed to extend above the iliac crests, or above the umbilicus. Diet is of the utmost importance. In the spastic form the food should be fine and non-irritating; in the atonic form, on the other hand, coarse granular foods are to be preferred. The position of the patient while recumbent is important. To favor emptying the stomach the left side should be elevated. In conclusion, the speaker said that too much weight could not be attached to a careful examination of the gastric contents.

## New York Academy of Medicine.

*May 3, 1900.*

### HYPERCHLORHYDRIA.

Dr. Max Einhorn read a paper on this subject. He said that, in his experience, more than one-half of the cases of gastric dyspepsia have been examples of hyperchlorhydria or excessive acidity from hydrochloric acid. This was probably owing to the fact that many of his patients were men subjected to the daily strain of active business in a large city. The disease is much less frequently met with in rural districts. A common feature of these cases is a burning or other uncomfortable sensation in the region of the stomach, experienced about one hour after meals, or at least after the heartiest meal of the day. The appetite is usually good, and in some instances an unnatural hunger is experienced instead of distress an hour after eating. Another characteristic feature of hyperchlorhydria is that the ingestion of food gives relief. The disease is apparently a functional disorder. Prominent in its causation are worry and mental strain, and hence women who endeavor to keep up with the whirl of society are often victims for the same reason that men at the head of large business interests fall an easy prey to this derangement. Tobacco and alcohol are also prominent etiologic factors. Gastric ulcer is a frequent accompaniment, but can hardly be considered a cause. Where the two conditions coexist, the presence of the ulcer may be suspected by the obstinacy of the case when properly treated, for, as a rule, cases of hyperchlorhydria respond promptly to treatment. He is not a believer in exclusive diets, preferring a happy medium. He usually allows the patients tender meats, not too highly flavored, plenty of milk, water and sugar, but permits them to have only a small quantity of the starchy foods, particularly potatoes. If they are given small meals at short intervals, the disagreeable sensations will quickly disappear. Sugar and fat both diminish the activity. Alkalies, such as bicarbonate of sodium or calcined magnesia, should be given about two hours after meals, and if constipation is present, rhubarb may be added with advantage. Washing out the stomach is not essential. Usually the administration of the bromids is of very great benefit, and sometimes the local internal use of faradism or of a gastric spray of nitrate of silver solution will be found useful.

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## Cleveland Medical Society.

Dr. O. B. Campbell, President *pro tem*, in the Chair.

### SYNOVITIS OF KNEE-JOINT.

Dr. William E. Wirt presented a case due to traumatism that had lasted nearly three years. He had been applying hot air, together with rest, fixation and protection, and had also used electricity and massage, the joint improving greatly; the amount of fluid in it very promptly diminishing, so that tapping was unnecessary.

He presented another case in which there had been contracture of the tendo Achillis, following infantile paralysis. Here he secured a satisfactory result by cutting the contracted tendon, extending the joint, and putting it up in plaster-of-Paris.

He also presented a case in which there had been knock-knee on one side and bow-leg on the other. The latter was operated on by simple osteotomy with fracture, though the bone was found to be very hard, as is often the case in rickets. On the other leg, he did a supracondyloid osteotomy and put it up in plaster.

### USE OF X-RAY AND ELECTROMAGNET IN LOCATING AND REMOVING FOREIGN BODIES FROM THE VITREOUS HUMOR.

Dr. A. R. Baker read a paper on this subject, and presented several specimens which had been removed from the vitreous humor with the electromagnet, after being located by radiographs. The photographs showed distinctly the presence of the foreign bodies that had been located by needles placed at right angles in front of and alongside of the eye. In one case, a very small piece of steel had penetrated the cornea, iris and lens, had been located by means of the radiograph, and successfully removed, with the preservation of good, useful vision. The author expressed the opinion that there is danger in using the strong Haab magnet in all cases of suspected foreign bodies in the vitreous for diagnostic purposes. The safer way is first to take a radiograph, then make a counter-opening through the sclerotic and remove with the magnet, and not attempt removal through the original wound.

Dr. S. E. Lauder said he had used an electromagnet that was operated by the 110-volt current and capable of lifting about twenty pounds. He had been successful in removing a piece of steel through the wound of entrance, and in one case the eye was saved because the steel, having come from the center of a large bar, was sterile. In another, although the foreign body was removed, it infected the eye, which was lost. He has not been successful in the use of the X-ray, and prefers removing the foreign body through the original opening if the case is seen early enough.

Dr. S. H. Large said the difficulty in removal of foreign bodies arises from the facts that they tend to go into the center of the vitreous.

### SUPPURATION AFTER ABDOMINAL SECTION.

Dr. Hunter Robb read a paper based on an analysis of 114 unselected abdominal sections. His conclusion is that the chief cause of poor results or of death following an operation, is infection. To avoid this he sterilizes the skin of the patient about the field of operation, the hands of the operator and of the assistants, the ligatures, etc. He uses catgut to suture the peritoneum, silver-wire mattress sutures for the fascia, and subcuticular catgut ones for the skin. He then cleanses the incision and field of operation with sterile salt solution, followed by alcohol, after which the skin is gently dried with a sterile towel. Dry sterilized iodoform is then sprinkled over the wound, after which two thicknesses of sterilized gauze are laid over it and these followed by pieces of sterile cotton large enough to cover the abdomen from flank to flank, and from umbilicus to pubes. This dressing is held in place by adhesive strips. In the 114 cases only 8—7.2 per cent.—suppurated, although 29 were pus cases, and drainage was used but once, and in these suppuration was confined to the skin and subcutaneous tissue.

Dr. M. Rosenwasser said that the essayist had not mentioned that infection of the abdominal wound may occur from the fact that in some cases the staphylococcus pyogenes albus is located beneath the epidermis, so that scrubbing and disinfection can not remove it. If a stitch has been tied a little too tightly, so as to cause compression neurosis, the presence of this organism is sufficient to cause infection, that can not rightly be attributed to any fault of the technique. As showing the difference between the epidermis, which is often inhabited by germs, and the mucous membrane, which is not usually so, he has noted that stitch abscesses are not liable to occur in operations on the pelvis by the vaginal method.

### ADENOCYSTOMA OF KIDNEY.

Dr. R. J. Wenner reported a case where he had removed three large uterine fibroids from a woman of 40, whose urine before operation was normal in amount and character, but on the third day after she suddenly became comatose and died. Post-mortem showed no evidence of infection or obstruction, but the kidneys were large and filled with multiple cysts, and little normal secreting tissue remained. After section, Dr. Howard pronounced the disease to be adenocystoma. Parker of Bristol studied 88 cases and found this occurring more frequently in males. Less than half had albuminuria, but the urine was usually of low specific gravity, light colored and rather increased in quantity. Dr. Howard had seen four of these cases in the last two years. In Dr. Wenner's case the kidneys were enlarged, and the cysts, varying in size from a pin's head to a small walnut, were rather regularly distributed throughout the organs. The ureters were patulous and the pelves normal, the capsules non-adherent, but there were multiple cysts of the liver. He showed a cystic kidney from a case of Dr. C. F. Hoover's, that had been diagnosed antemortem by palpation. He thinks this probably the largest kidney ever observed, and in this specimen, also the ureters were patulous and the pelves enlarged—not obliterated. He showed also a very rare specimen of adeno-cysto-myxo-angio-rhabdo-myo-sarcoma, which was removed from a case operated on by Dr. G. W. Crile—one of the most extraordinary mixed tumors ever reported.

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## Topeka Academy of Medicine and Surgery.

*Topeka, Kan., May 7, 1900.*

President Dr. B. D. Eastman.

### GOITER.

Dr. S. A. Johnson read a paper on this subject. He said that a congestive swelling of the thyroid gland is seen occasionally, from irritation of the sexual organs or during menstruation. Suppurative inflammation is rare but when it occurs is usually of tubercular origin. In tuberculosis the gland is thickened and enlarged, the overlying skin is discolored and abscesses and sinuses are formed. If the diagnosis can be made sufficiently early thorough surgical treatment may result in a cure, but the entire removal of the gland is hardly permissible.

Tumors of the thyroid are common, and are found more frequently on the right side than on the left, involving at times only a portion, and at other times the entire gland. The hereditary character of goiter is not clearly established. It occurs most frequently in women, though rarely before the tenth year, and will increase in size with each succeeding pregnancy.

The diagnosis is generally easy. The growth is usually chronic, rises and falls in the act of deglutition, is painless, not adherent to the overlying skin, and has no attachments to the inferior maxillary or clavicle. It is not adherent to any parts of the neck, with the exception of the larynx, and is usually covered with prominent veins. It is frequently an impediment to respiration and sometimes to deglutition. Occasionally it grows inward and presses on the trachea, causing absorption of its cartilages.

The cause of goiter has not been discovered, but the disease is peculiar to certain people in certain localities. As a treatment, iodin sems to do the most good, and may be given internally, locally externally, or hypodermically. He reported two very interesting cases, in both of which iodin was used with recovery as the result.

Dr. R. E. McVey said that he had seen three or four malignant cases which resulted fatally, one death being from pressure; the patient having refused to have an operation.

Dr. O. A. Taylor spoke of a mining camp in Missouri, where three-quarters of the cases were in negroees. The tumors were vascular and the pressure on the blood-vessels affected the heart considerably. He said that some authorities claim this is more prevalent in those who carry heavy burdens on the head, and that the negroes from the mining camp were from the South, where they were accustomed to doing this.

Dr. W. H. Hall said that the iodin treatment externally is more successful if an antiseptic is combined with it.

## German Congress of Surgery.

*Berlin, April 18-21, 1900.*

### INOPERABLE CARCINOMA.

The proceedings were opened with an urgent appeal by Czerny for the more thorough treatment of inoperable carcinomata, stating that 75 per cent. of all cases that come to the surgeon are inoperable, and according to Duhrssen only 10 per cent. of the women with carcinoma of the uterus are cured. He would operate to the farthest possible limit, far into the sound tissue, and resort to palliative measures of all kinds. Ligature of the afferent vessels may prove useful, especially with carcinoma of the tongue. Curetting and searing will surely relieve and may cure. In one observation, a carcinoma of the rectum was rendered mobile by cauterizing with a solution of zinc chlorid, permitting extirpation. He reports forty-eight cases of cancer of the uterus not affected by curetting and tamponing, but all cured by cauterizing with a 30 to 50 solution of zinc chlorid. He has found that formalin, arsenic and Fowler's solution induce pain and inflammation, and he has had no good results from the numerous general remedies proposed, but would try them as patients expressed a desire therefor.

### ABDOMINAL AND RECTAL SURGERY.

The interest of the Congress centered principally in the line of preferable methods and remote results of abdominal and rectal surgery. Kroenlein has collected statistics from eleven German surgical clinics, representing a total of 881 operations for carcinoma of the rectum during the last twenty years. The mortality varied from 12.6 per cent. in one clinic to 26.7 in another; average mortality 19.4. More than 51 per cent. were due to sepsis; 18 to collapse, and over 13 per cent. to pneumonia or embolism. In 15 per cent. the deaths had no connection with the operation. Eighty of the 640 patients followed to date survived three years without recurrence. Resection of the invaded bladder and urethra has always been unsuccessful, and operation should be rejected when neighboring organs are involved. He always retains as much as possible of the anal sphincter, and has secured normal continence in 30 per cent. of his thirty-nine personal cases; relative continence in 60 per cent., and failed completely in 10 per cent. Rehn urged the necessity of extirpating the portion of the rectum involved, with the fascia, without opening the rectum. In case the rectal aponeurosis is traversed by the neoplasm the prognosis is bad. Reports on the remote results of operations on the biliary passages show that recurrence of calculi is little to be feared, but that disturbances of various kinds were noted in 15 per cent. due to stones left behind, to adhesions, threads or cholecystitis.. The indications are to extirpate the gall-bladder and drain the biliary passages but to refrain from operating except for important reasons. Israel reaffirmed the benefits of incision of the convexity in certain cases of chronic nephritis, speaking from an experience with 40 cases. He would also operate for renal and ureteral calculi in case of pyelitic infection, absolute anuria or severe hemorrhage, but would refrain from all intervention on patients who at regular intervals evacuate small round stones. They constantly form again and intervention would be useless. In opening the kidney he would carry the incision down to the pelvis.

### TRANSPLANTATION OF TOE.

Successful transplantation of the second toe in place of an amputated finger was reported by Nicoladoni.

### EXSTROPHY OF BLADDER.

A patient was exhibited, operated on by Mikulicz for exstrophy of the bladder. A loop of the small intestine was isolated and implanted in the bladder and abdominal wall, completing the operation as usual with two lateral flaps. The patient wears a clamp on the urethra to prevent escape of urine. Trendelenburg has treated this deformity by bringing the two ilia closer together by artificially separating the sacroiliac articulation. He has obtained excellent results by this method in a number of cases, although patients could not retain urine over two hours. He attributes this to the gradual separation of the bones, which he has tried to remedy by making an artificial fracture in the ilium itself. Payr presented a new contrivance for suture of arteries, consisting of a tube made of an absorbable metal—magnesium. The hollow cylinder is placed over one stump of the artery, and the end of the latter turned up and over on the cylinder all around; the other stump is then slipped over it, thus bringing the inner surfaces in contact, and they are held in place with a ligature. The magnesium tube is absorbed in a few days. The contrivance has also been applied to the suture of nerves, and further uses for it are being suggested.

## Philadelphia Pathological Society.

Dr. F. A. Packard, President.

### PATHOLOGY OF BUBONIC PLAGUE.

Dr. H. F. Harris made some remarks on the pathologic alterations in bubonic plague, with exhibition of microscopic preparations of the diseased tissues. The specimens had been given the speaker through the kindness of Dr. W. F. Arnold, who had obtained them in Hongkong. In this condition the lymph glands affected had a greyish-red appearance which often denotes hemorrhage not infrequently occurring in bubonic plague. On section, lymph cells, red corpuscles, and enormous numbers of the plague bacilli could be seen. The mast cells did not appear to be phagocytic. A few plasma and polynuclear cells were also present. The bacilli in the tissues stained best with toluidin blue and eosin.

### HYDATID CYST OF LIVER.

Dr. F. P. Henry reported the history and exhibited a specimen of this condition, from a negro, a native of Virginia. At autopsy two distinct hydatid cysts had been found in the right lobe of the liver, the capsule of which was rather hard and contained gelatinous fluid, together with the hard material which resembled putty. Hooklets of the echinococcus were found.

Dr. F. A. Packard said he had seen four cases, two in negroes. In these cases the putty-like material had also been found.

THE JOURNAL OF THE
AMERICAN MEDICAL ASSOCIATION.
61 MARKET STREET, - CHICAGO.

SATURDAY, JUNE 2, 1900.

## SECRET NOSTRUMS AND THE JOURNAL.

When some two months ago The Journal announced its intention to subject the matter of proprietary medicines to a thorough investigation, it realized that the task was a difficult one. While sporadic attempts have been made from time to time, by medical associations and by medical journals, but little progress has been made in checking the evils complained of and, in fact, but little light has so far been shed on the subject. It is believed that this has been primarily due to failure in comprehending the vast scope of such inquiry. The field is so large that nothing short of the most thorough consideration of the entire subject, in all its phases, will be adequate to furnish a basis for such conclusions as may be necessary in determining the status of the various medicinal agents and compounds which the enterprise and genius of foreign and domestic manufacturers are constantly evolving and offering to the medical profession.

The necessity for this departure needs neither explanation nor apology. The members of the medical profession have a right to demand that The Journal should at all times furnish such information as may be necessary to keep them informed on everything that is of practical value and, as far as is practicable, to expose charlatanism, deception and quackery.

In justice to the many reputable firms whose interests are so closely related to medical practitioners and their representative journals, a closer scrutiny should be made of claims for medical preference and patronage, in order to separate, as far as possible, the true from the false. The special articles devoted to this subject have aroused considerable interest, especially among those directly interested in medical manufacturers, and while most of the communications received, relating to these articles, have been rather complimentary, others have evidently emanated from persons who were not fully aware of the intent and purpose of this investigation. In the first place, let it be understood that The Journal will endeavor to be just to all. It will make haste slowly, for this matter is of too great importance to be settled in a rush or without first arriving at a fair and impartial summary of the situation. While but little has so far been done in our investigations of the subject, there are some propositions which have already been fairly settled. Among these are: 1. Medical preparations, the composition of which is kept secret, should not have medical patronage. 2. Those which are directly advertised to the laity as remedies, or cure-alls for disease, should not have medical patronage. 3. Manufacturers of preparations designed for external use need not necessarily be required to furnish the exact proportions of the ingredients except in cases in which some of these are active or toxic agents.

It may be said that the advertising pages of The Journal contain announcements that, according to the above, ought not to be there. This is true as regards some advertisements, but these will be eliminated from our pages on expiration of existing contracts unless they are made to conform to our requirements. It may be interesting to some to know that the policy of refusing to accept advertisements of secret nostrums has already resulted in an annual loss to The Journal of over $8000. While a still further financial loss must come, there need be no fear as to The Journal being able to live on. In any event it will not shrink from the task it has assumed, nor permit any withdrawal of support or patronage of its pages to cause it to swerve from its position that secret medicinal preparations are incompatible with scientific medicine and rational therapeutics.

## THE DANGERS OF EXCESSIVE SPECIALIZATION.

In these days of specialization the field of the general practitioner is becoming greatly restricted. In fact, there is some danger that in many instances the so-called general practitioner ultimately may come to perform the functions of a mere business agent of the specialists, and to act as the local distributor for the patients in his community. At the same time, as the value and the need of genuine specialists in medicine are fully recognized and established, there can not be too strong a warning uttered against a tendency noticeable in some quarters to carry specialization to a degree of refinement beyond all reason. The formation by a handful of specialists of special societies and associations—too numerous to mention—may easily be carried far enough to reduce the usefulness of larger societies at the same time as the special fields become so small that the general attention the subjects discussed really merit is not fastened on them. And now, add the establishment of full professorships and special clinics and special hospitals for all the specialties and subspecialties, and we shall be able to understand that it is quite possible, by an excessive specialization, to hinder rather than favor medical progress and development. The introduction of specialties into the curriculum of many of our undergraduate medical schools has surely been an evil rather than a blessing. It is not germane at this time to discuss the various local and special conditions that have led to such a wasteful multiplication of full professorships, in many cases often against the better judgment of the governing bodies. It has been especially baneful for the just balance of the curriculum to admit the special professorships to full and equal dignity with those in medicine, surgery, anatomy, physiology and other departments recognized as of fundamental importance. In this way the time-card in many of even our better colleges, little by little has become so overcrowded with required work that this condition alone in some cases has led to efforts at readjustment. What with lectures, recitations, dispensary and college clinics apportioned equally among new-fledged special professors, it becomes a fine art to satisfactorily provide room for all on the schedule, to say nothing of the poor students. In fact, is it not a fact that in not a few instances college positions have become the legitimate prey of self-seeking specialists who have sought for a field in which to exploit their specialty rather than a legitimate opportunity to teach medical students? Is this not one of the reasons why students on leaving the medical school are often remarkable for the superficial and smattering character of their knowledge and not at all for thorough acquaintance with the underlying principles of medicine and with the proper methods of continuing the study of medicine in a much larger and broader sense?

It is interesting to note the expensive tendency that special departments in some medical schools may acquire, presumably on account of local conditions and personal peculiarities. Thus the nasal specialist may enter on a career of conquest in a downward direction until he secures the annexation not only of the lungs and the pleura but also the mediastinum and heart; sometimes also the aorta, the barrier interposed by the diaphragm being disregarded. At other times the gynecologist becomes aggressive and stops not until, as far as his school or hospital is concerned, he is sole master of abdominal surgery. Manifestly such unnatural subdivision of medicine and surgery make it impossible to secure the best organization of the work of a medical college and the proper adjustment of the curriculum. It would serve the purpose more directly and better if much of the special instruction in our medical schools could be given under the supervision and control of the departments of medicine and surgery. Medicine and surgery should be taught from a broad standpoint, not first dismembered and parcelled out piecemeal. The large perspective of the whole should be impressed on the student at the same time as he masters the details that are essential. This subject could with advantage be pursued much further. Reprehensible specialization affects the general practitioner in various ways. It tends to diminish the confidence of the public in the "family doctor," and to engender a certain feeling of helplessnesss in the practitioner himself, when he views the increasing growth of specialties. He comes to feel that in order to hold his own "the general physician must be his own specialist"—an impossibility.

## ACCIDENTAL INJURIES TO THE PROSTATE GLAND.

Although the prostate gland may become diseased in consequence of abnormal or excessive sexual indulgence, it is, by reason of its situation and its structure, little exposed to the influence of ordinary traumatism. Disease of the prostate may, however, be for a time wholly unattended with symptoms or subjective manifestations, and these may make their appearance suddenly, although the morbid process may have been present for some time. Even the normal gland varies considerably in physical characters, such as size, shape, position and consistency. Increased sensitiveness may, however, always be considered a pathologic manifestation. In illustration of the individual susceptibility of the prostate gland to morbid influences, Oberlaender[1] reports four cases in which disease of that gland was induced by falls on the buttocks without direct injury to the perineum. In one case the symptoms present included pain at the anus, a sense of weakness in the sacrum, incapacitation for work, and pain and difficulty in walking. On urethroscopic examination the prostatic urethra was found tender, bleeding readily and constricted. The lateral lobes of the prostate were equally large, irregularly nodular, tensely elastic and painful. Under treatment most of these symptoms disappeared, but the prostate remained enlarged and tender. Eventually a copious amount of pus and blood was one night evacuated through the urethra and the patient at once relieved. A considerable time elapsed, however, before he was freed from all of his symptoms. In the second case there was anal pain on attempts at walking, progressively increasing and especially distressing and painful vesical tenesmus, constant pain in the glans penis, especially in micturition, and finally persistent burning pain. At times blood appeared in the urine, which contained also a few purulent filaments. On rectal examination the prostate appeared enlarged, smooth, softly elastic and tender to the touch, as was also the vesical trigone. The patient had been incapacitated for work for nine months and was in a desperate state. Castration was performed and remarkably rapid improvement followed. After some time, however, the symptoms again grew worse and persisted with varying intensity. In the third case symptoms of severe, purulent, chronic prostatitis developed, the pain on walking and standing being particularly severe. The lateral lobes of the prostate were intensely elastic and extremely painful. Under treatment improvement ensued, but the prostate remained enlarged and painful. In the fourth case suppuration took place in the prostate and in both testicles.

It is assumed that in all of these instances the normal integrity of the affected gland was previously impaired. The long persistence of the pain at the anus and the sacrum and the difficulty in micturition point conclusively to injury of the structure of the gland—either contusion or laceration. As the accident was unattended with hematuria and urinary infiltration, the injury could not have involved the mucous membrane of the prostatic urethra, and as there was no immediate difficulty in defecation it is probable that the rectum also escaped. It is thought that definite peculiarities, such as a deficiency in the fat of the buttocks, the situation of the gland close to the anal orifice, relaxation of the sphincter ani—thus conditions favoring transmission of force directly to the gland—may be important factors in the etiology of the lesion. In addition a latent morbid condition of the gland may be essential. The prognosis of the disorder appears unfavorable, all of the patients in the cases reported having been incapacitated from the pursuit of their respective avocations. The usual medicinal measures proved ineffectual, and some surgical measure, such as resection of the spermatic cord or total extirpation of the prostate gland, would appear indicated.

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[1] Centrabl. f. die Krankheiten der Harn- und Sexual-Organe, B. xi H. 1, 2.

## CONDITION OF URINE IN RELATION TO DISEASE OF THE STOMACH.

The determination of the degree of acidity of the urine furnishes a guide as to the alkalinity of the blood and as to certain relations between variously reacting secretions of the digestive glands and the reaction of this excretion. Examination of the urine for ferments may afford an explanation of the fate of these bodies after the performance of their functions. When the stomach-tube can be used, a study of the gastric juice will yield information with regard to the disturbances in the digestive chemistry in cases of secretory functional disease of the stomach. If the use of the tube be contraindicated, examination of the urine may furnish correct guidance. It is well known that the acidity of the urine diminishes, and finally disappears, after a meal, in consequence of the withdrawal of acid from the blood for the purposes of gastric digestion. Reasoning by analogy it has been suggested that the acidity of the urine must vary in association with diseases of the stomach attended with increased or diminished secretion of gastric juice.

To test the accuracy of these views and to determine the practical utility of their application, Friedberger[1] undertook a study of the urine under various conditions. During a period of hunger there was but slight variation in the degree of acidity. By avoiding irritation of the stomach and excluding gastric digestion, through the practice of rectal feeding, it was found in a case of slight hyperacidity that the introduction of food into the bowel was followed by increased acidity of the urine, and this is attributed to the withdrawal of alkali from the blood for purposes of intestinal digestion. The conclusion is therefore reached that if diminution in the acidity of the urine after the taking of food by the mouth is under ordinary circumstances an index of the acidity of the gastric juice, the increased acidity of the urine after the administration of food by the rectum may be considered an index of the activity of intestinal digestion. Deviations from this relation may be significant in the recognition of diseases of the intestines and its glandular appendages. They would be less trustworthy in connection with diseases of the stomach on account of the disturbing influence of the alkaline intestinal digestive secretion upon the acidity of the urine. However, the reaction of the urine within the first few hours after the ingestion of food must be largely influenced by the character of the gastric secretion. In two cases of gastric achylia, with an absence of free hydrochloric acid from the gastric juice, and in one case of carcinoma of the esophagus, the maximum diminution in the acidity of the urine appeared earlier and lasted a shorter time than normal after ingestion of food by the mouth. In another case of carcinoma, however, the conditions differed little from the normal. Of two cases of gastric ulceration the reduction in the acidity of the urine following the ingestion of food lasted longer than normal in one and scarcely longer in the other. From these observations it is concluded that when rectal feeding is practiced, the acidity of the urine is increased for some hours thereafter, instead of being diminished, as it is after ingestion of food by the mouth. In the presence of disease of the stomach attended with diminished secretion of hydrochloric acid the maximum reduction in the acidity of the urine after meals occurs earlier than normal; while in the presence of disease with increased secretion the reduction occurs later. These relations are, however, not so constant and not always so pronounced as to be available for diagnostic purposes. Inasmuch as these observations demonstrate that the acidity of the urine does not depend on gastric digestion alone the amount of pepsin in the urine was investigated. Observations in cases of carcinoma, gastric achylia and hyperacidity showed that an interdependence exists between the secretion of pepsin by the stomach and the elimination of pepsin with the urine, in such a way that if but little pepsin be found in the urine it may be concluded that but little has also been secreted by the stomach. In some cases of excessive gastric secretion the amount of pepsin in the urine was distinctly greater than in health, while in others it was scarcely greater, so that in the diagnosis of the former condition no confidence can be placed in the results of examination of the urine for pepsin. The conditions are different, however, in cases of deficient gastric secretion, as here the amount of pepsin eliminated with the urine is diminished. This occurred with such constancy under the conditions named, and was wanting in connection with all other forms of gastric disturbance, that its semeiologic significance must be accepted.

## FUNGOUS DISEASE OF THE CORNEA.

Leber, Uhthoff, Fuchs, and others have described rare cases of infection of the human cornea with organisms belonging to the moulds. Recently Wicherkiewicz[1] recorded an instance of this kind: A servant girl dropped a piece of potato, covered with dirt, into the eye; three weeks later there had developed a yellowish-white mass on the central portion of the cornea, the marginal vessels being congested, and the anterior chamber containing pus. The process appeared slow and chronic in its course, painless, and the mass was elevated and firm. Examination of a piece of the mass showed that it consisted of a dense network of fungous threads, and cultures gave rise to pure growths of the mould—penicillium glaucum. Treatment succeeded in checking the process, but not without permanent corneal opacity, greatly diminishing the vision of the affected eye.

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[1] Deutsches Archiv f. Klin. Med., B. lxv, H. 5 u. 6, p. 567.

[1] Arch. f. Augenheilk., xl.

### THE ALLEGED ANTIMALARIAL INFLUENCE OF LIME.

The United States Marine-Hospital Bureau republishes, from the *Revue d'Hygiene,* in one of its latest weekly reports, an article on the antimalarial effects of lime, by Grellet. The author notices the fact that in several localities in France malaria has entirely disappeared since lime has come to be generally used for fertilizing purposes, the status as to drainage, stagnant waters, etc., remaining unchanged. Following out the line of inquiry thus suggested, Grellet found that in a number of regions where the soil is rich in lime, malaria is absent, though other conditions that favor it prevail. He suggests that a thorough investigation be made as to the relation between the nature, and especially the constituents, of the soil and the malarial germ. So far as we have noticed, this coincidence of the existence or use of lime in the soil and the absence of malaria has not been remarked by recent writers on the prevention of this pest of mankind, and certainly we have not seen accounts of any experimental researches on the action of lime salts on the plasmodium or its hosts. If there should be, by any possibility, anything in it, the suggestion is worth following up.

### DRUG FIENDS AND JURIES.

A medicolegal point of some interest and, though possibly not altogether new, one that will bear repetition, has been made by Dr. C. C. Stockard.[1] It is the question of the fitness of drug habitués for places of trust generally but particularly for jury duty. One such individual told him that were he in such a position, rather than be tied up on a jury where there was no opportunity for his getting his accustomed dose, he would consent to the hanging of one he was sure was an innocent man, and the Doctor believes he was no exception in this. We have never happened to hear of a juror being challenged for cause because he was an opium or alcoholic habitué, but there would seem to be no better ground. In fact, we doubt whether this possibility always or even often occurs to the mind of a lawyer in selecting a jury. In case of the opium habit there must be considered the special mental idiosyncrasies from the habitual use of the drug as well as the effects of deprivation, and the question might arise as to how supplying or not the needs of some unfortunate victim of habit on the jury might affect the validity of the verdict.

### SANITARY SUPERVISION OF HAVANA, CUBA.

The report of Major W. C. Gorgas, surgeon U. S. A., chief sanitary officer at Havana, shows for April, 1900, a total of 482 deaths in a population which, according to the official census, numbers 235,000. The principal causes were: tuberculosis, credited with 80 deaths; enteritis, 48; malaria and pernicious malarial fever, 30; meningitis, 22; pneumonia, 18; la grippe, 18; and bronchitis, 17. During the month 137 marriages were reported and the relatively large number of 1084 births. Attached to this report, in the office of the surgeon-general of the army, is a tabulated statement, by months, of the deaths from all causes and from yellow fever since 1890. In only five months during the past 124 months has the number of deaths from all causes been smaller than in April, 1900. In January and February, 1890, the number was respectively 441 and 463; in February, 1893, 442; and in February and April, 1894, 470 and 467. The average monthly number of deaths in 1897 was 1510, and in 1898, 1770, but in 1899 this average fell to 680. The beneficial effects of a strict sanitary supervision of the city is manifest in the reduced mortality lists since Jan. 1, 1899. It is yet too early in the history of American sanitary methods in Havana to speak of their influence in the suppression of yellow fever, but it may be noted that since Jan. 1, 1890, there have been only three months in which no death has been recorded as caused by yellow fever, and these three months have all occurred since American methods were put in force, February and May, 1899, and April, 1900.

### THE ETIOLOGY OF TETANUS.

In view of the uncertainty of our knowledge about the exact etiology of tetanus, especially of the so-called rheumatic and idiopathic forms in which the points of entrance are obscure, to say the least, the conclusions of Thalmann,[1] obtained from an extensive experimental and literary research, may be of interest. Thalmann was not able to produce tetanus in guinea-pigs by introducing tetanus bacilli into the stomach, intestines, or urinary organs, no matter whether diseased or healthy. The conditions in the oral cavity do not seem to differ from those of the skin as regards infection with tetanus. Wounds of the nose present favorable conditions for infection both directly as well as through inspiration. When healthy the respiratory passages are impervious both to toxin and to bacilli, but if catarrhal states exist infection may take place. The introduction of spores into external wounds produces chronic, fatal disease without tetanic manifestations. Exposure to cold has no influence on the course of the disease in cases of external infection. There is some clinical evidence that the infection atrium of "idiopathic" tetanus is to be sought in the nose and in the oral cavity, and Carbone and Perrero found tetanus bacilli in the bronchi of a patient with so-called "rheumatic" tetanus. Because tetanus bacilli lose their virulence when exposed to oxygen, Thalmann recommends that in protracted instances of "rheumatic" tetanus, inhalation of oxygen and expectorants be employed in addition to antitoxin. It is not impossible that tetanus may result also from infection through the tonsils.

### THE MEDICAL PROBLEMS OF THE TRANSVAAL WAR.

The success of the medical arrangements for the present war in South Africa has been so complete and so generally commended that we are apt to think they do things altogether better over there than we can here. Our many shortcomings in the medical management of the recent Spanish-American War, as we

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[1] Virginia Medical Semi-Monthly, April 27.

[1] Ztft. f. Hyg. u. Infektionskr., 1900, xxxiii, 287.

*more Americano* by the yellow press, are apt to occur to us in striking contrast. Now comes, however, a correspondent of the *London Times*, who points out that the medical outfitting of a single army corps with its lines of communications, exhausted England's home supply of medical officers, and that the favorable outcome so far has been due not to foresight and due provision for all possible needs, but to a singular good fortune. Thus far the war has not been on any wholesale scale, the engagements have been mostly small and insignificant, as compared with European wars and those in our Civil War, and even among them we must consider such as Elandslaagte, where the wounded lay out all night on the field they had won. If there had been an engagement like that at Gettysburg or Plevna, the medical resources would have been most notably deficient. Were the war conducted in a country like Cuba, or were the troops massed in camps in a climate like that of even Florida or Georgia instead of one notoriously healthy and in peaceable times a health resort, the case would have been also different, and the tax on the medical corps infinitely increased. The sick-roll as well as the casualty list are both shining examples of good luck as well as of good medical management. All these things must be considered when we are inclined to draw unfavorable comparisons between our own experience and that of the British in the present war. The conditions have been entirely different, and nearly altogether in their favor. Besides those already mentioned, we must remember that on a peace footing their army, in all its departments, was many times as large as ours at the outbreak of the war with Spain, and the strain on the machinery correspondingly less. In spite of this, it has been, as we learn from many sources, most severe, and almost disabling, and the defects of the British system are being very seriously discussed, in view of the still greater tasks a war on a large scale, a general European war involving Britain let us say, would exact. Our own experience of unpreparedness has been to some extent repeated in Great Britain; we both need to give attention to the better organization of our army medical departments. Taking everything into account, however, it does not appear that on the whole our army medical corps will suffer from any comparisons.

## INCREASE OF CANCER IN PRUSSIA, SAXONY AND BADEN.

An important statistical study of the mortality from cancer in these countries, during recent years, is reported by Maeder[1] from Flügge's hygienic institute in Breslau. In 1894 Finkelnburg published a similar one on the distribution and frequency of cancerous diseases in Prussia, with especial reference to the Rhine provinces, for the years 1881 to 1890 inclusive, and Maeder's work in a measure forms a continuation of Finkelnburg's. The former's figures are for the years 1891-1896. They show conclusively that in Prussia the number of deaths from cancer has steadily increased, while those from tuberculosis, which are used for purposes of comparison, have fallen off. Furthermore, the mortality from cancer is over twice as great in the cities as in the country. The increased death-rate from cancer per year equals .115 per cent.—.098 per cent. falling on men and .133 per cent. on women—of the total deaths. The increase in cancer per year equals .79 per cent. of 10,000 living—.18 per cent. falling on women, .165 per cent. on men. Both sets show a preponderance of cancer among women. Similar general results were obtained from a study of the statistics of Saxony and Baden, in which the registration of deaths is better controlled and more reliable than in Prussia. It is important to note that certain regions that Finkelnburg's statistics showed to be especially prone to cancer still maintain this unenviable distinction. This is regarded by Maeder as a strong point in favor of the correctness of his results. He points out that his statistics can not be regarded as founded on absolutely correct figures, yet such a thing as error in diagnosis, for instance, would remain about the same from year to year throughout as large a territory as his material covers. He does not believe that the diagnosis of cancer can have become so much more refined from year to year, in city and in country, as to account for the increase shown by the figures. He believes that the mortality statistics are the only ones that can be used for the purpose of securing accurate data as regards the supposed increase in the frequency of cancer, because the information obtainable as to morbidity would be decidedly unreliable. Patients with cancer commonly go from physician to physician, and in the early stages the diagnosis of carcinoma is often uncertain. The cause of the increase in the disease remains obscure. The increase does not appear to be due to a falling off in tuberculosis, because the increase in cancer is too large to be explained thus.

## SARCOMA OF THE PERICARDIUM.

The case of primary, diffuse small-celled sarcoma of the pericardium, recently described by Williams and Miller,[1] is certainly a remarkable one. It occurred in a boy, aged 13 years, the first symptoms appearing a few months before death; prominent among them were dulness over the left lung in front, great increase in the force of the heart's beat, a transitory left pleural effusion followed by a progressive enlargement of a solid nature of the entire chest so that a hard tumor could be felt by pressing the fingers in between the ribs, especially in front. Deglutition became exceedingly difficult, and dyspnea was marked. Toward the last breathing was possible only by a leaning forward at an angle of 45 degrees, and to the left, with the head resting on a low table. General dropsy developed. The post-mortem showed an enormous tumor, filling up the entire chest, produced by a diffuse thickening of the parietal pericardium, which was in some places 6 cm. in thickness. The interior of the pericardial cavity was quite smooth; the heart was normal, free from tumor growth, but smaller than usual. The mediastinal and peribronchial lymph-glands were but little enlarged; some small areas of tumor tisue were present in the posterior parts of the lungs, especially in the lower third of the left one. It goes without saying that the lungs were greatly compressed, and, with the tumor and the heart, weighed over six pounds. The microscopic structure of the tumor was that of a small-celled sarcoma. The enormous, uniform thickening of the pericardium and the slight enlargement of the peribronchial and mediastinal glands, and absence of glandular and other enlargements elsewhere in the body, justify the conclusion of Williams that the growth was primary in the parietal pericardium, developing from its lymphatic layer. Tumors of the pericardium are very rare, the primary less frequent than the secondary. The reported cases show two forms of growth, one occurring in a nodular form, the other as a diffuse, uniform, and enormous thickening of the parietal layer. Williams and Miller's case is a classic example of the diffuse form. The predominating clinical feature in most of the cases of this kind has been severe dyspnea continuing throughout the course of the disease.

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[1] Ztft. f. Hyg. u. Infektionskr, 1900, xxxiii, 235.

[1] N.Y. Med. Jour., April 14; The Journal, April, 28, ¶ 23, p. 1056.

## TRUMAN W. MILLER, M.D.

Born, March 2, 1840. Died, May 31, 1900.

Dr. Truman W. Miller was a graduate of Hobart College, Geneva, N. Y., and received his medical education at the College of Physicians and Surgeons of New York City. In 1862 he was appointed medical cadet, U. S. A., and was promoted to acting assistant-surgeon in 1863. In the same year he received his degree of M.D., from the Geneva Medical College. He served in the Army of the Potomac until after the Battle of the Wilderness, when he was transferred to Chicago and assigned to duty as post and examining surgeon, which position he held until the close of the war.

In 1873 he was appointed assistant-surgeon, U. S. Marine-Hospital Service, and in 1877 was promoted to surgeon, which position he held until his resignation in 1886. For six years he was surgeon of the 1st Regiment, Illinois National Guard, and was a member of the Grand Army of the Republic.

During his very active life he served on the staffs of many of Chicago's prominent hospitals, and at the time of his death was president and professor of surgery of the Chicago Policlinic; consulting surgeon to the St. Joseph, German, and Alexian Brothers' hospitals; surgeon to the Maurice Porter Children's Hospital; surgeon-in-chief to many of the leading lines of railroads, and medical referee and consulting surgeon to a number of life and accident insurance companies.

He was an active member of all the leading national and local medical societies, and vice-president of the Board of Trustees of the American Medical Association. After the death of Dr. J. B. Hamilton, he personally conducted the affairs of The Journal of the Association until the appointment of the present editor.

Dr. Miller was eminently a man of action and was not given to writing. He was possessed of a pertinacity of purpose that knew not to fail, and whatever he undertook was carried out if it lay in human possibility. His executive ability was extraordinary: questions were solved with rare judgment and apparently on the spur of the moment, yet when analyzed it was found that all possibilities had been carefully considered. The Chicago Policlinic had its origin with him, and to his exertions and wise management are due the sound financial and professional success which that institution enjoys. He was its first and only president, and, up to the time of his death, possessed the absolute confidence of all his colleagues.

One of his noblest traits of character was his great kindness to the young man. Many young men, both within and without the profession, owe their start and success in life to his kind advice, his wise counsel and his generous material aid, and the latter, when needed, was never found wanting. Nor was his generosity limited to young men, for many of the older ones who hold high professional positions owe much to his aid and influence.

TRUMAN W. MILLER.

To his friends he was always true, to his enemies, just, and where he could not commend he never condemned. He was of a jovial disposition, saw the bright side of life, and was a most enjoyable companion. As his honor w[illegible] unimpeachable and his integ[illegible] never que[illegible]tioned, his influence was wi[illegible]

T[illegible]

first wife. His habits of life were plain and he was a man of the people. He died full of honor and the love of his fellow men, and his record is clear.

Of the life that is gone let us cherish the good,
'Tis sufficient, whate'er be said,
Let us think of the heart so noble and grand
And bury all else with the dead.

# Medical News.

## ILLINOIS.

A home and hospital for deaconesses was dedicated May 24, in Peoria.

St. Clara's Hospital, at Lincoln, is to have a new building that will cost $2000.

A new pension examining board has been established at Geneseo. L. A. Ferry, Geneseo; W. A. Grove, Galva, and W. H. Cole, Kewanee, have been appointed members.

Dr. J. H. Hewitt, Galesburg, has returned to the Klondike, where he has been for the past two years. He will practice his profession there.

### Chicago.

*Dr. J. B. Murphy made the address at the commencement* exercises of the Galesburg Hospital. May 22.

A special examination by the Illinois State Board of Health, for physicians only, will be held at the Great Northern Hotel, June 18-20.

Dr. Arthur Dean Bevan delivered the commencement address before the graduating class of the Illinois Training School for Nurses, May 28.

Cards are out announcing the coming marriage of Dr. L. Harrison Mettler, of this city, to Miss Minnie Warner, of Clinton, Ill., the event to take place June 12.

Two newly incorporated institutions are the Chicago Physiological School and the Illinois School of Electro-Therapeutics. The latter will offer two-weeks courses for physicians and the former is for the education and development of delicate, neurotic and slightly subnormal children, and is affiliated with Rush Medical College.

#### MEDICAL SCHOOLS IN GOOD STANDING.

Under the provisions of a resolution adopted July 11, 1899, the Illinois State Board of Health will not consider in good standing any medical college which does not, after January 1, 1900, require of students—excepting graduates of reputable colleges of arts and sciences, or of reputable colleges of dentistry, pharmacy or veterinary medicine, to whom one year's advanced standing may be granted—as a condition of graduation, an attendance on four full courses of lectures of at least six months each in four separate years. In the enforcement of this resolution the Board has refused to admit to examination graduates of 1900 from over forty well-known medical institutions, located in Alabama. Georgia, Kansas. Louisiana, Maryland, Michigan, Missouri, New Hampshire, New York, North Carolina, Tennesseee, Texas, Vermont and Virginia.

#### EXCURSION TO PARIS.

The committee having in charge the excursion to the International Medical Congress, Paris, for the Illinois, Iowa and Missouri state medical societies, has arranged for a special train from Chicago to New York. This will consist of vestibuled Pullman sleepers, leaving on the afternoon of June 26, arriving at Albany, N. Y., the morning of the 28th, in time for breakfast. From Albany one of the Hudson River day-line steamers will be taken for New York, arriving there about 6 p.m. The cost for the entire trip, including railroad fare, sleeper and hotels, will be $18.50, provided the party numbers one hundred. In order to insure the required number, those wishing to join this party are invited to do so. Information may be obtained from Dr. J. W. Pettit, Ottawa, Ill.; Dr. J. W. Cokenower, Des Moines, Iowa; or Dr. Chas. Wood Fassett, St. Joseph, Mo.

## NEW YORK.

At a recent operation in St. John's Hospital, Long Island City, on a man who had shot himself in the breast, it was found that the bullet had shattered the sternum, and that splinters of this bone had penetrated the lung. The operator, finding that he had made a cut into the pericardium, inserted five sutures and closed the rent, but the incision gave a fine opportunity to those present to observe the action of the heart. The man died five hours later from internal hemorrhages, as proved by the autopsy.

### New York City.

#### SNEAK THIEF ROBS PHYSICIAN.

An office thief recently entered the house of a physician in Harlem while the latter was out, asked to be allowed to wait, and while doing so undertook to appropriate some of the Doctor's instruments. Being interrupted by the physician's wife, the thief choked her and then ran from the house. He was caught and turned over to another man who came running up and said that he was a detective, but the thief and the alleged detective took a direction away from the police station. When the deception was discovered the chase was renewed and the thief finally arrested.

#### ENDOWMENT NEEDED.

Roosevelt Hospital has made an appeal for $500,000 to carry on its work. In the twenty years that it has been in existence its scope has greatly increased. Instead of the 59 employees required twenty years ago, the number is now 200. Since 1881, five departments have been added, and the ambulance service is now heavier than ever before, there having been no less than 4041 ambulance calls in the past year.

#### BETH-ISRAEL HOSPITAL.

The corner-stone of the new building for this hospital was laid with appropriate ceremonies, May 27. Addresses were delivered by Randolph Guggenheimer, Isidor Strays, the Rev. Dr. Schulman, and Dr. A. Jacobi. This institution was founded in 1890, and being situated in the center of an exceedingly thickly populated district, its work has steadily increased, until now the demands made on it are far in excess of the accommodations. The new building, which will accommodate 100 patients, is to have a modern equipment. It will be five stories high, covering a plot of ground 78 by 112 feet.

## PENNSYLVANIA.

On May 23, seventeen dealers were arrested in Pittsburg for violating the oleomargarin law.

Dr. Jesse Cooper, New Castle, has gone to Europe to do post-graduate work.

The fourteenth annual commencement of the Western Pennsylvania Medical College was held May 22, in Pittsburg. Chancellor W. J. Holland conferred the degree of Doctor of Medicine on a class of sixty-five.

### Philadelphia.

Dr. John H. Packard, who has for the past few months been visiting Naples, Rome and other cities in the interest of the Academy of Fine Arts, has returned home.

Through the will of William E. P. Baker, $200 has been given to the Germantown Dispensary and Hospital and to the St. Luke's Home and Hospital.

Dr. Henry W. Stelwagon, of the Jefferson Medical College, who has been elected an honorary member of the National Dermatological Society of Italy, sails soon to attend the International Dermatological Congress to be held in Paris.

Through the will of Charles T. Matthews $500 has been left to the Howard Hospital; $300 to the Philadelphia Home for Incurables; $300 to the Children's Hospital. Also $500 was given to the Children's Seashore House at Atlantic City, N. J., and $500 to the Hospital of the Good Shepherd for Children, in Delaware County.

#### QUARANTINE STATION.

The Reedy Island Quarantine Station of this city is to be further reinforced by the addition of the *Powhattan*, which at one time was used as an auxiliary gunboat of the navy, and was assigned to this station by the United States Marine-Hospital Service. The vessel is 108 feet long, 21 feet beam, with draft of 11 feet. She has a maximum speed of twelve knots an hour, and has recently been overhauled.

#### UNIVERSITY ALUMNI OFFICERS.

At the last annual meeting of the Philadelphia Alumni

Society of the medical department of the University of Pennsylvania the following officers were elected: president, J. Madison Taylor; honorary vice-president, C. C. Harrison; vice-presidents, Henry Beates, Jr., Thomas H. Fenton, Edward W. Holmes, and J. L. Forwood; recording secretary, W. S. Wadsworth; corresponding secretary, B. F. Stahl; treasurer, Herbert B. Carpenter.

#### EXAMINATIONS FOR ENTRANCE.

The entrance examination for the medical department of the University of Pennsylvania will be held at the University, June 14-18, and September 21-25. Similar examinations are to be held in twenty-one other cities of the United States, New Brunswick and Prince Edward Island. The other cities in the state where such examinations are to be given are, York, Harrisburg and Pittsburg.

## OHIO.

AT THE RECENT examinations of the state medical board 250 received license to practice medicine.

#### STARLING MEDICAL COLLEGE.

At a recent special meeting of the trustees of Starling Medical College of Columbus, the faculty appointed was as follows: Otto Frankenberg, professor of obstetrics; Louis Kahn, professor of anatomy; Charles B. Moray, lecturer on physiology; W. D. Deuschle, lecturer on nervous diseases; J. M. Phillips, on pathology; J. H. Upham, on diseases of children; John L. Gordon, on physical diagnosis; and John Rauschkolb, lecturer on pharmacy.

#### ANNUAL REUNION.

The annual banquet of the Society of Internes of the Cincinnati Hospital was given May 19. Speeches were made by Drs. E. W. Walker, A. B. Thrasher, S. E. Allen, D. I. Wolfstein, John Noffert, Rushville, Ind., and Shaler Berry. Louis Schwab was toast-master. The election of officers resulted as follows: president, Robert Stewart; vice-president, M. B. Brady; secretary, A. Freiberg; treasurer, J. C. Oliver, John Noffert, class of 1849 was elected honorary president.

## MARYLAND.

DR. GEO. L. BROADRUFF has been elected to the Cumberland City Council.

DR. SAMUEL T. HAFFNER has been appointed Frederick County health officer, vice Dr. D. M. Devilbiss.

### Baltimore.

DR. WM. H. WELCH has been appointed to deliver the "Shattuck lecture."

DR. WILLIAM OSLER leaves for his summer vacation in Europe, June 16.

DR. WILMER BRINTON has resigned the chair of obstetrics in Baltimore Medical College, and Dr. J. M. H. Rowland has been elected to fill the vacancy. Dr. J. Williams Lord has been elected associate professor of anatomy in the same institution, vice Dr. Rowland.

THE FOLLOWING appointments are announced at the Woman's Medical College: John L. G. Lee, LL.B., professor of medical jurisprudence; Louise Erich, adjunct professor of hygiene; M. Ekstromer, professor of chemistry; Richard H. Thomas, president of the board of trustees.

THE QUARANTINE physician has received strict instructions with regard to the introduction of plague into Baltimore through ships coming from South American ports, especially Rio Janeiro, where the disease appears to be getting a foothold.

#### APPROPRIATION FOR SMALLPOX EXPENSES.

The health commissioner appealed to the board of estimates for an appropriation to meet the expense connected with the recent outbreak of smallpox and the salary account of the vaccin physicians and health wardens. The sum of $2112 was appropriated from the contingent fund, which will allow $50 a month salary to each physician, and $500 for clothing and bedding destroyed, and maintenance of families during the sickness of patients.

#### SANITARY CONDITION OF SCHOOLS.

The Good Government Arundel Club has done a commendable work in calling attention to the wretched condition of our public school buildings. The building inspector says that 50 per cent. of the regular school buildings are probably unfit for use, and not more than 30 per cent. of these can be altered to meet sanitary requirement. The money at his disposal—$120,000 for all public buildings—will admit only necessary repairs.

## NORTH CAROLINA.

#### BOARD OF EXAMINERS.

At the annual session of the North Carolina State Board of Medical Examiners, fifty-two were licensed to practice medicine. The Board was organized and, as constituted for the next two years, is as follows: E. C. Register, Charlotte, president and examiner in materia medica and therapeutics; J Howellway, Waynesville, secretary and treasurer and examiner in anatomy; D. T. Taylor, Washington, examiner in surgery; Thomas Anderson, Statesville, examiner in physiology; Albert Anderson, Wilson, obstetrics and gynecology; T. S. McMullen, Hertford, chemistry and microscopy; J. C. Walton, Reidsville, pathology and medical hygiene.

## ALABAMA.

THE NAME of the *Alabama Medical and Surgical Age*, published in Birmingham, was changed with the May issue, to *The Alabama Medical Journal*. Dr. John C. Legrand continues as editor and proprietor.

## TEXAS.

AT THE ninth annual commencement of the medical department of the University of Texas, held in Galveston, May 13, Dr. W. S. Carter delivered the address, and degrees were conferred on sixteen young men.

## NEW HAMPSHIRE.

THE EXAMINATIONS for license to practice medicine will be held at the state house, Concord, June 19 and 20.

## INDIANA.

DR. A. C. HOLTZENDORFF, Plymouth, left May 26 for a tour of Europe, and will later attend the International Medical Congress at Paris.

AT THE annual meeting of the Board of Trustess of the Indiana Medical College, John Geis was made professor of toxicology and forensic medicine; Edward D. Clark, surgical pathology; and John Sluss, professor of anatomy.

## RHODE ISLAND.

THE NEW bacteriologic laboratory of the Rhode Island Hospital, in Providence, was opened early in May. J. W. Eby, a member of the original staff, made the address.

THROUGH the wills of John Nicholas Brown and Harold Brown, both of Newport, $1,000,000 has been left in trust for the benefit of the Rhode Island and the Butler Hospitals.

## CONNECTICUT.

DR. MOSES C. WHITE, professor of pathology in Yale University, has resigned. The resignation was accepted and he was elected professor emeritus in the medical school's faculty. Dr. Charles Bartlett was advanced to a full professorship, to succeed Dr. White, and Dr. Otto Ramsey, of Johns Hopkins University, was elected a member of the faculty, the chair to be assigned later.

## KANSAS.

### Topeka.

CHRIST HOSPITAL has arranged to send out a missionary nurse among the poor of the city, gratis on the request of any physician.

DR. W. B. SWAN, of the State Board of Health, in his last report says smallpox in the state is diminishing rapidly, as there are now only 366 cases.

#### ADDITION TO HOSPITAL.

The Stormont Hospital's board of trustees has awarded the contract for building an addition to the hospital, to cost about $13,000, and to be completed in five months. It will be three stories high and provided with a fine new operating and sterilizing room and all modern conveniences. The addition will be built with money furnished by Mrs. G. G. Gage, of Topeka.

## CALIFORNIA.

### SAN FRANCISCO'S PLAGUE.

Since The Journal's last week's report on the plague conditions in San Francisco, an injunction has been granted to prevent the Federal and local health authorities from discriminating against the Chinese in the matter of precautions against the plague. This means that the Chinese can not be forcibly inoculated with antiplague serum and that they can not be prevented from entering or leaving San Francisco by the Federal quarantine officers. A Chicago paper has sent Dr. Geo. F. Shrady, of the *Med. Record*, to inquire into the plague scare, and he is quoted as saying (May 28): "So far as I can learn from a conversation held this morning with the president of the health board, there is at present no case of bubonic plague in San Francisco. I have asked to see even one such case, and no one high in authority is able to produce one. There has not been reported, either officially or otherwise, a suspected case since May 15. These are the facts so far as I have been able to obtain them up to the present time. From such a point of view there is every reason for congratulation, not only on account of the great interests at stake from the commercial side of the question, but very much more because of the otherwise possible wholesale sacrifice of precious lives." The cases not previously reported in The Journal follow:

Case 3.—A Chinese girl, aged 16, was employed and died in a cigar factory. She was seen on May 11, by the bacteriologist, who found a large bubo on the right side below Poupart's ligament, over which a sticky black plaster had been applied by the Chinese physician. The body was well nourished and plump. The glands were removed and found to be as large as a walnut, very dark on section, the cut surface having a mottled appearance. The interior of the gland was soft and mushy. A smear preparation showed the pest organisms in enormous numbers, and apparently in pure culture. Diagnosis was confirmed by inoculation of guinea-pigs and rats, all dying with typical lesions of the plague.

Case 4.—Another Chinese girl, aged 17, was a house servant in a Chinese family at No. 730½ Commercial Street. She was taken sick suddenly, with headache, fever, constipation and pain in the abdomen. On the third day she was taken to the Pacific Hospital, Stockton and Chestnut Streets, where she was delirious and the diagnosis of typhoid fever was made. She died in two days, or on the fifth day of the disease. She was seen after death, on May 9, by Drs. Wilson and Kellog, the latter removing the lymphatic glands from a well-marked bubo on the right side near the saphenous opening. The glands were very large, dark and mottled on section, soft and necrosed in the interior. Microscopic examination showed the plague organism in large numbers. Diagnosis was confirmed by inoculation.

Case 5.—A male Chinese, aged 53, a laborer and married, died, May 14, at 740 Pacific street. He had been in California ten years. There was a bubo on the left side on the anterior surface of the thigh, below Poupart's ligament; the skin was slightly discolored. The glands were removed by the bacteriologist, Dr. Kellogg, who found the same appearance described above. Microscopic examination showed the bacillus pestis, and the diagnosis was confirmed by inoculation.

[Press dispatches, May 30, announce the finding of another dead Chinaman, the autopsy showing every indication that death was due to plague.—Ed.]

## LONDON.

### EDINBURGH'S CHAIR OF MEDICINE.

Dr. John Wylie has been appointed to the chair of medicine in the University of Edinburgh, rendered vacant by the death of Sir Thomas Grainger Stewart. Dr. Wylie is 58 years of age. He graduated with honors in 1865, and was awarded a gold medal. He became lecturer on pathology in the Extra-Academical School and later lecturer on medicine; in 1876, assistant physician to the Royal Infirmary, and in 1882, physician. His principal published work is a book on "The Disorders of Speech," which appeared in 1894.

### THE MOSQUITO THEORY OF MALARIA.

What has been well termed a "dramatic expedition" is being organized by the Colonial Office to finally prove to the satisfaction of the public at large that malarial fever is directly attributable to bites of mosquitoes. Dr. Louis Sambon and Dr. G. C. Low, of the School of Tropical Medicine, who have never suffered from malarial fever, have volunteered to live in a specially constructed hut in the Roman Campagna—a district described by Dr. Manson of the Colonial Office as one of the deadliest spots on earth. Dr. Sambon is an ex-surgeon of the Italian army, who has for many years made a special study of tropical diseases in view of a government mission to Abyssinia, which was never carried out, owing to the Italian defeats. He is now lecturer at the London School of Tropical Medicine. The expedition was suggested to the Colonial Office by Dr. Manson, and the idea was at once accepted. The hut in which these two physicians will live is a wooden building with double casements, covered with special zinc, mosquito-proof netting, and there is a special system of double doors and curtains in the entrance porch. As an additional precaution the beds will be surrounded with mosquito nets. In the day the experimenters will pursue their work in the open air. The chances of being bitten by the special kind of mosquito found in the Campagna are very slight.

### PROF. VICTOR HORSLEY'S ATTACK ON MODERATE DRINKING.

Prof. Victor Horsley has delivered the second "Lees and Raper Lecture"—a lecture instituted in commemoration of two temperance leaders—at St. James' Hall, before a crowded audience, comprising many of those most prominent in the total abstinence movement. The high scientific position which Prof. Horsley has achieved by his work on the physiology, pathology and surgery of the nervous system places him in an entirely different position from that of most of the medical advocates of total abstinence. Of most it may be said without the slightest reflection on their good faith, that their prominence is obtained by the part they play in advocating total abstinence and not by any scientific reputation on this or any other question. Professor Horsley's address was a bold and uncompromising attack on the principle of moderate drinking. He showed Kraepelin's apparatus for ascertaining the "reaction time" of the brain. Kraepelin had found that after a small dose of alcohol the "reaction time" was at first shortened, but this was very quickly followed by a gradual lengthening, and that various additions, subtractions, etc., when performed after taking alcohol appeared to the operator to be done more rapidly, but examination of the records shows that they really have been performed more slowly. As to the effect of alcohol on voluntary movements he said that even a moderate dose gave rise to tremor. The pressure dynamometer showed a slight increase of power; soon followed by a notable decrease, but under the influence of tea there was no decrease. The cause of the preliminary increase was not known: it was probably due to a paralysis of the brake-action or resistance to movement, and was therefore proof of a paralyzing action from the first. Dr. Aschaffenberg had showed that compositors set up less type after than before taking alcohol.

### THE SOUTH AFRICAN WAR.

The unqualified praise of the work of the army medical service in the South African War has been received with great satisfaction by the profession. Owing to the effete caste spirit, which still prevails in the army, the medical staff has always been treated as an inferior body. Even during the present war the lack of respect is illustrated by the fact that a general, speaking at a public dinner, said that he would rather fall into the hands of the Boers than one army surgeon. Only after a protracted and difficult struggle have the military authorities given the same rank and titles to the officers of the medical corps as are enjoyed by combatant officers. Matters reached such a condition that there was a serious dearth of candidates of the best class to fill vacancies. The war has brought home to the public the fact that the strong influence of social position in the making of appointments has produced inefficient leaders and most disastrous results; that while the combatant officers are, in certain instances, under a cloud, the medical officers, who are despised because they enter the army as a profession by which to live, have for this very reason proved efficient. Speaking at a dinner given to Sir William McCormac and Mr. Frederick Treves, on their return from South Africa, Lord Roseberry bore eloquent testimony to the value of the services rendered by the medical corps, for while so much criticism prevailed as to the military operations, nothing but the most unqualified praise was heard of the medical corps.

### THE INFECTIVITY OF TYPHOID FEVER.

At a meeting of the Epidemiological Society, Dr. E. W. Goodall, superintendent of the Eastern Fever Hospital, read a paper on this subject. He remarked that the belief is almost universal that typhoid fever is very rarely communicated directly from the sick to the healthy, but that the fever is, in almost every instance, contracted by the ingestion of water or food contaminated by the alvine discharges of patients. Yet Brettoneau, Trosseau, Budd, Watson, and more recently Collie, maintain its direct infectivity. Of late years there has been a growth of opinion among medical officers of health and of fever hospitals that direct communication from the sick to the healthy is more frequent than was supposed. Numerous instances are recorded of the propagation of the disease among the members of a family or the inmates of a house, and among nurses, ward servants and laundry maids in hospitals. The suggestion that these cases are due to defective drains and unsanitary conditions was refuted by the fact that the hospital cases were confined to the nurses and attendants, other patients remaining exempt. Dr. Goodall believes that direct communication is more easy than was supposed. Petruschky had shown that the urine is highly infective, and in the absence of proper precautions, the infection was frequently conveyed by soiled fingers, and, perhaps, diffused in the dry state, was frequently inhaled in the form of dust. This was particularly liable to occur in the dwellings of the poor, and that it did not occur more often in hospitals was due to the care taken in the removal of the excreta and of soiled linen. Dr. F. F. Carger, superintendent of the Southwestern Fever Hospital, said that there, in nine years, twenty-three of the nurses attending cases of typhoid fever had contracted the disease, and in the same period but one patient has been attacked, although 20 per cent. of the admissions to the typhoid wards were not suffering from that disease. Nurses usually contracted the disease in times of great pressure.

## CANADA.

**MEASLES** is epidemic among the troops at Halifax.

**THE SIXTH** death from smallpox has been recorded in the quarantine station at Winnipeg.

**DR. WESLEY MILLS**, professor of physiology at McGill, is at present studying in Leipsic, Germany.

**DR. J. D. ARCHIBALD**, late house physician to the Hospital for Sick Children, Toronto, has been appointed surgeon-lieutenant in the Royal Medical Corps, Bermuda, and left last week to assume his duties.

### SMALLPOX.

**DR. MONTIZAMBERT**, director-general of public health at Ottawa, has issued a statement that there are now only about fifty cases of smallpox in all Canada, and all of these with the exception of those at Winnipeg are of an exceptionally mild character. Strict and rigid inspection is being maintained along the borders of the western states, and all arrivals from the United States are being closely watched. It appears to be spreading among the mining camps on the north shore of Lake Superior, and it is causing the department of health in Ontario some uneasiness. Dr. Bryce has been at Port Arthur, where the disease has broken out; and a special physician has been sent up from Toronto. The militia authorities have decided to exempt from annual drill this year all regiments from smallpox-infected districts. Special medical reports are now being received by the department, from military districts in which the disease has appeared, and every precaution will be taken to protect the camps.

### THE DOCTOR AND THE INSURANCE COMPANIES.

**DR. A. FREELAND**, Ottawa, writes to the *Canadian Practitioner* complaining of the treatment accorded the physician in the matter of filling out death certificates. The questions on the insurance blanks, to which he calls attention, are: "Is there any tendency to consumption or other hereditary disease in the family?" "When and for what have you attended deceased prior to last illness? Give the immediate and remote cause of death," etc. While these are questions quite proper to be asked by the company's examiner before the acceptance of the person's application, it is certainly nothing short of gross impertinence to ask them of the family physician after the death of his patient. Another piece of effrontery complained of is that these self-same companies require the physician to proceed to a notary's office, and take an oath that the information supplied is correct, although no fee is allowed by them for the trouble. There ought to be a fair solution of these disabilities, and the companies should be brought to understand that the doctor is worthy of his labor in this respect.

### THE PROVINCIAL BOARD OF HEALTH AND TUBERCULOSIS.

At the recent session of the Ontario Parliament the local board of health has been empowered to put in force the following legislation: 1. That hereafter all houses and rooms, whether in hotels or otherwise, in which tubercular persons have been, shall be disinfected, and the health authorities shall see to this. 2. That persons must not make false statements as to the existence of such cases. 3. That in government institutions persons suffering from tuberculosis shall be kept from infecting others. 4. That with the above aims in view, health officers shall be urged to require notification of cases of tuberculosis as empowered by the public health act. 5. That the Stratton act—referring to the establishment of sanatoria, and noted in former correspondence to THE JOURNAL—be distributed to health officers, medical men, clergymen, and the public generally, by means of a circular, appealing to them to use their influence to have the municipal authorities avail themselves of its provisions, where necessary in the interests of humanity, and for the saving of life.

### LABORATORY WORK IN ONTARIO.

In the report of the Board of Health of Ontario for the year 1899, which has just been sent out, the provincial bacteriologist, Dr. J. J. McKenzie, gives the work of that department for the twelve months. The 1370 specimens examined were as follows: suspected sputum, 629; suspected exudate, 375; suspected typhoid blood, 164; waters for bacteriologic examination, 116; waters for chemical examination, 29; miscellaneous samples, 62; suspected rabies, 5. Of these samples, 1100 were sent in by 300 physicians. Of the 5 suspected cases of rabies, 2 turned out to be the disease. These 2 were from the southern peninsula of Ontario, the district in which practically all our cases of rabies are found. Among the miscellaneous work and investigations was a continuation from last year's work of the study of the character of the bacillus found in grass; and it is pointed out that the discovery of this bacillus in butter is apt to give rise to error in its being mistaken for the tubercle bacillus.

### INSPECTION OF MUSKOKA HEALTH RESORTS.

The season having arrived for outings in Muskoka, it may be important to notice the report of Dr. Bryce on this district. After a thorough, personal inspection of the entire Muskoka district, he states that nowhere in the areas inspected is there any danger from the water-supplies, as the provincial board has for some time past been at considerable pains to educate the people of Muskoka up to the necessity of keeping the water-supply free from sewage. He goes on to state that the residents are now taking very great care as regards the disposal of household refuse, in order to prevent effluvium nuisances; and that remarkable progress is being made in modern methods of sewerage disposal in connection with even the smallest resorts of the Muskoka district. The principle recommended for adoption by Dr. Bryce is essentially that of the septic tank, with an overflow to a receiving tank, whence final disposal is made to subsurface tiles; or an artificially made bed in which the principle of final nitrification of the sewage is to be carried out. The larger hotels, accommodating from 100 to 200 guests, may in the future be looked on, with these improvements completed, as object-lessons to many people who go from our towns, of what may thus be done in the disposal of sewage by simple methods, if scientifically and practically applied. Pamphlets descriptive of methods of disposal of house wastes and sewage are issued by the board of health, and are put in the hands of the proprietors of these summer hostelries, so that all may make it their endeavor to keep Muskoka well to the front as a summer resort.

# Correspondence.

## The Value of the Medical Visit.

St. Louis, Mo., May 28, 1900.

*To the Editor:*—The value of medical service is estimated by all that is done for the patient. Visits are only incomplete memoranda of time. The value of a visit depends on the time spent in making it, distance and delay at the bedside and what sort of personal service is given in the examinations and in the manipulations of the patient. Hypodermic medications may be required in a locality demanding special anatomic knowledge and some surgical skill. The examination of hidden cavities—the throat, vagina, bladder, rectum, etc.—and the exercise of the *tactus eruditus* may be required. They call for skill as well as outlay, for education, instruments and time. Thoracic and abdominal examinations requiring more or less time are often essential to a correct diagnosis as well as urinary and blood analyses. The taking of blood or sputum for a slide and samples of urine or other excretions is a service that adds to the value of a visit and ought to be estimated and charged for.

Designating a visit without stating what the doctor may be required to do at the visit gives an inadequate idea of medical service. Things may be done at one visit that may save a life, while nothing may be done or required at another one, and that may be a brief call, a few routine directions and continuance of treatment—an ordinary visit. The treatment of a grave case, the visits thereto, or to one not yet well in hand, and those to a case in which death or other critical stage is approaching, necessitate more time and attention than in the ordinary run of self-limited disease. For instance, a visit may be very ordinary or very extraordinary in extent and kind of service rendered, and in result depending on the physician's skill and judgment exercised.

There are many other facts and circumstances not understood by the public, the patient's friends or the courts, embraced in the term "visit," which ought to be made plainer in our fee bills. Services in the crisis of a bad case or dying patient are imperative and we must give them when they are demanded, whether we miss our office hours or attention to other business or less imperative cases, and in such a visit extra time must be charged for and this should be cheerfully paid. The sacrifice of the office hours is great loss, and damages and sometimes endangers ruin of the doctor's best business. The night visit sacrifices the doctor's comfort, the office hour visit his best income. In the out-of-town visit these facts are considered in the charge, by all doctors. The home visits should always be similarly regarded.

The value of the doctor's visit therefore varies greatly. It may be a loss to him of only so much time or it may be much in money that may be made or much in broken rest and imperiled health. It may be the saving of a life by a timely remedy judiciously applied, the comfort of the patient promoted, or a favorable turn in the patient's disease toward health, through the doctor's delay and sacrifice at the bedside, to watch and skilfully minister to the patient, while patients wait for his coming in his office or leave it and go or send elsewhere for medical service.

Sufferance and sacrifice are "the badge of all our tribe" and will be so till the end of time, but the recipients of our benefactions and our sacrifices or self-denials and our work should understand, through our fee bill, that visits are not all alike in value, that they represent varying degrees of time and expense to us and of labor, skill and experience to the patient.

C. H. Hughes, M.D.

## Colorado and Quarantine Against Consumptives.

*To the Editor:*—In The Journal for May 12, page 1156, Dr. Joseph Matteson, of Chicago, in his article entitled "Notification and State Supervision of the Tuberculous," makes the following statement: "It is rumored that the State Board of Health (of Colorado) had under consideration the advisability of quarantine against more consumptives."

Inasmuch as Dr. Matteson has made this public statement, I deem it my duty, as Secretary of the State Board of Health of Colorado, to request that you make equally public my statement that no such measure has ever been seriously considered by the Colorado State Board of Health. You will see by reference to Circular No. 20 of the State Board of Health, which was issued in February of this year, that instead of considering a quarantine the statement is made that "There is no need to talk of quarantining against consumption. Such a course is both unnecessary and impracticable. Doubtless, many persons with advanced tuberculosis should not be sent here, but for those who can not be benefited by coming, Colorado should have nothing but a warm welcome."

Yours truly, G. E. Tyler, Secretary.

## Alcohol in the Tropics.

Fort Riley, Kan., May 26, 1900.

*To the Editor:*—In your editorial in The Journal, May 19, you mention my article in the *Philadelphia Medical Journal* of April 7, in which I advocated the moderate use of alcohol to combat the exhaustion due to the heat and moisture, and warn against the serious effects of immoderate and bar-room drinking. You mention a volunteer surgeon who has somewhat similar views, i. e., "the use of liquor in any form in the tropics is unnecessary except it be the red wine issued by the Spanish Government to their troops." It is difficult to understand why you can say that these views are directly opposite. You also say: "Judging from the condition and efficiency of the Spanish troops this (red wine) would not seem to have helped them much." It seems to me that it may have helped them very much; for in spite of reduced rations for many weeks, they were so efficient that 500 of them at El Caney successfully fought about 6000 regulars nearly all day long, and a mere handful whipped General Duffield's brigade of gallant Michigan men. I find that soldiers who have faced the Spanish do not hold your opinion of inefficiency.

You say that the burden of proof is on those who are opposed to generally received opinions. On the contrary, in modern life the burden of proof is on those who still adhere to the old dogmas of the pre-scientific age of religion and medicine. This is just what makes the believers in theological and medical dogmas so hysterical—they can not prove their ridiculous assertions, about "load on the liver," "overworked kidneys," "spring medicine" or "predestination and free-will."

Very truly yours,
Chas. E. Woodruff, M.D.,
Captain and Asst.-Surgeon U. S. Army.

[We suggest to our correspondent that he read the editorial again. Ed.]

# Association News.

**Order of Business.**—The following is the order of business of the general sessions of the American Medical Association, at the Atlantic City meeting. The general sessions will be held in the Marine Hall, Young's Pier.

First Day, Tuesday, June 5—10:30.

Call to Order—By the President, W. W. Keen, Philadelphia, Pa.

Opening Prayer—By Rev. Frederick J. Stanley.

Addresses of Welcome—By His Excellency, Foster M. Voorhees, Governor of New Jersey, and Hon. F. P. Stoy, Mayor of Atlantic City.

Report of the Committee of Arrangements, by the Chairman, Philip Marvel.

Report of General Business Committee.

Address of the President of the American Medical Association, W. W. Keen, Philadelphia, Pa.

Report of the Treasurer.

Report of the Secretary.

Report of the Committee on Department of Public Health, U. O. B. Wingate, Milwaukee, Wis.

Report of the Committee on National Legislation, H. L. E. Johnson, Washington, D. C.

Report of Special Committee on Revision of Constitution and By-Laws, E. Eliot Harris, Chairman.

Proposed Amendments to the Constitution.

Miscellaneous Business.

Special Announcements.

Reception of Delegates.
Adjournment.

SECOND DAY, WEDNESDAY, JUNE 6—10:30.

Call to Order.
Reading of Minutes.
Report of General Business Committee.
Announcements by Committee of Arrangements.
Oration on Surgery, W. L. RODMAN, Philadelphia, Pa.
Oration on State Medicine, VICTOR C. VAUGHAN, Ann Arbor, Mich.
Report of Board of Trustees.
Report of the Committee on AMERICAN MEDICAL ASSOCIATION MEDAL, GEO. M. GOULD, Philadelphia, Pa.
Report of Committee on Senn Medal, W. L. RODMAN, Philadelphia, Pa.
Report of the Committee on the Reorganization of the Army and Navy Medical Corps, THOMAS H. FENTON, Philadelphia, Pa.
Report on the Committee on the Rush Monument Fund, JAS. C. WILSON, Philadelphia, Pa.
Report of Special Committees.
Miscellaneous Business.
Adjournment.

THIRD DAY, THURSDAY, JUNE 7—10.

Call to Order.
Reading of Minutes.
Report of General Business Committee.
Announcements by Committee of Arrangements.
Oration on Medicine, JOHN A. WITHERSPOON, Nashville, Tenn.
Report of Nominating Committee.
Report of Special Committees.
Miscellaneous Business.
Adjournment.

FOURTH DAY, FRIDAY, JUNE 8—10.

Call to Order.
Reading of Minutes.
Report of General Business Committee.
Announcements by Committee of Arrangements.
Appointment of Delegates to Other Societies.
Unfinished Business.
Introduction of President-elect.
Adjournment.

**Special Transportation Notice.**—The Committee on Transportation desires to call especial attention to the paragraph in THE JOURNAL of May 9, page 1277, regarding extension of time limits, etc., and begs to say it is liable to be misleading, inasmuch as the reduced fare return tickets must be secured at Atlantic City and not at any other point. Having secured a return ticket at Atlantic City, the holder may arrange to stop over at Philadelphia, Baltimore or Washington, for example, and make side trips during the time his return ticket is deposited at such stop-over point. Full information in this respect can be secured from representatives of the lines interested. Tickets should be purchased direct to Atlantic City, the purchaser stating that he is attending the medical meeting at that point, securing at the same time a certificate from the local ticket agent, which must be presented to Dr. W. Blair Stewart, at Atlantic City, on June 6, 7 or 8, for his countersign, and the stamp of the detailed railroad agent. The certificate so stamped must then be presented within the time limit, at the railroad ticket office in Atlantic City, for the purchase of the return ticket, which will be sold to the bearer on the payment of one-third the regular full fare to the starting-point of the initial ticket. Tickets of this character are usually sold for continuous passage returning without stop-over privileges. Under date of May 23, the trunk lines have granted stop-over privileges in their territory not to exceed the time limit of the ticket, June 23, providing the ticket so purchased be deposited with the representative of the road selling the initial ticket, and securing the stop-over privilege. Tickets will be sold direct to Atlantic City, over the bridge route, by all Pennsylvania lines and connections, including New England territory, and by the Big Four out of St. Louis, via Cincinnati, over the C. & O. Route, and from the South and Southeast by the Southern or Atlantic coast lines. H. L. E. JOHNSON, M.D., *Chairman*.

**Societies in Affiliation.**—The following societies are in affiliation with the AMERICAN MEDICAL ASSOCIATION, in addition to those published in THE JOURNAL of April 14.

KENTUCKY: Louisville Clinical Society.

MARYLAND: Baltimore County Medical Society.

MISSOURI: Southeast Missouri District Medical Society.

NEW YORK: Erie County Medical Association.

TENNESSEE: Bradley County Medical Society; Chattanooga Medical Society; Dyer County Medical Society; Gibson County Medical Society; Johnson City Medical Society; Knox County Medical Society; Madison County Medical Society; Marshall County Medical Society; Middle Tennessee Medical Society; Montgomery County Medical Society; Nashville Academy of Medicine; Rutherford County Medical Society; Sumner County Medical Society; Tipton County Medical Society; West Tennessee Medical and Surgical Association.

TEXAS: Colorado County Medical Society; Corsicana District Medical Association; East Texas Medico-Chirurgical Society; Kaufman County Medical Society, Panhandle Medical Association; Practitioners' Society of Dallas.

## Deaths and Obituaries.

ELMER W. WOODRUFF, M.D., was born in Reynoldsburg, Ohio, July, 23, 1863, and died in Columbus, Thursday, May 24. He received an academic education, and graduated from Starling Medical College in 1891, then practicing as a partner of his preceptor Dr. J. T. Mills, in Jersey, Licking County, Ohio, for four years. In 1895 he took a postgraduate course in the New York Post-Graduate School, locating in Columbus in September of that year, where he practiced until the time of his death. He was a member of the Columbus Academy of Medicine, Ohio State Medical Society, Mississippi Valley Association, and AMERICAN MEDICAL ASSOCIATION, the latter of which he served last year, in a most efficient manner, as assistant secretary. As a man he was above reproach, a citizen of unusual worth, a physician of rare quality; one whose sense of honor and high ideal in the medical profession is worthy the emulation of all; a man, whom to know, meant to trust, to respect, and to love. The loss to the community is great, the loss to the medical profession one that will be keenly felt. His was a life not well to be spared. Sacrificed by the all too faithful performance of his duty to patients afflicted with that dread disease which proved his undoing—pneumonia—his was a death which had it occurred in the battle of bullets instead of the battle of life civic, would have crowned him hero.

CHAS. H. VOORHEES, M.D., died at his home in New Brunswick, N. J., May 13, aged 76 years. He was graduated from Jefferson Medical College in 1850, and practiced medicine in Spotswood and Plainfield before locating in New Brunswick. During the Civil War he was a medical officer and saw service under Generals McClellan, Grant, Butler and Hooker. He was for many years a member of the staff of the John Wells Memorial Hospital. He was prominent in county and state medical societies and a member of the Ninth International Medical Congress, which met at Washington in September, 1887, and was elected vice-president of the section on military and naval surgery.

FESSENDEN NOTT OTIS, M.D., died in New Orleans, La., May 24, aged 75 years. He was born in Ballston, N. Y.; was graduated from Union College, New York, and finally in 1852 received his diploma from the now extinct New York Medical College. From 1853 till 1860 he was a surgeon on the United States Mail, and subsequently superintending surgeon of the Pacific Mail, Steamship Company. Besides, also, being a surgeon of police, he filled many other responsible positions in hospitals and dispensaries. In 1871 he became a lecturer in the College of Physicians and Surgeons, New York, and in 1874 identified himself in that institution with the chair of genito-urinary diseases.

JOHN SCUDDER, M.D., D.D., died in his 65th year, at Kodai Kanal, India, May 23. He was for 39 years a missionary of the Reformed (Dutch) Church in America, in connection with its Arcot mission, and had become an authority on the people of India. Like his ancestor, an Indian missionary of the same name, who was born in Freehold, N. J., Sept. 3, 1793, and died at the Cape of Good Hope, Jan. 13, 1855, he believed in proelyting by ministrations to the sick. He leaves a wife, a son and a daughter—Dr. Ida Scudder, recently a visitor to this country, who has charge of the mission's hospital work.

**Granville Knight**, M.D., Malden, Mass., died recently, after an illness of two years. He was born in Limerick Me., in 1836, and in 1850 went to Springfield to study medicine, and in 1861 he received his degree from the medical department of Vermont University, Burlington. He began the practice of his profession at Enfield Mass., but in 1867 moved to Springfield, where he remained until 1888, when he went to Malden.

**F. B. Mussey**, M.D., Cincinnati, Ohio, died May 12, aged 71 years. He was born in Hanover, N. H., and was graduated from Dartmouth College in 1840, and from the Ohio Medical College in 1844. During the Civil War he was a surgeon of the 33d Ohio Vol. Inf.

**John MacDonald**, M.D., New York City, died in St. Agnes Hospital, Philadelphia, May 21. He had been in the service of the Red Star Line for a long time and was surgeon of the Steamship *Waesland* for four years.

## Miscellany.

**Commissions to Acting Assistant Surgeons.**—In the House of Representatives, May 15, Mr. Howell introduced the following bill (H. R. 11587), which was referred to the committee on military affairs and ordered to be printed: Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That all acting assistant-surgeons of the United States Army who served as medical officers, agreeably to Army Regulations, either in the Civil War, the various Indian wars, the Spanish-American War, and the Philippine rebellion, and whose services were honorably terminated after one year's service, and those acting assistant-surgeons of the army who are still serving as medical officers, after one year's service, be issued commissions by the Secretary of War as acting assistant-surgeons of the United States Army in a similar manner that the commissions were issued to the acting assistant-surgeons of the United States Navy, the date of their commissions to be the date of their entry into the service of the United States as medical officers and the date when their services as medical officers were or will be honorably terminated to be the date of their discharge from the service of the United States; but any acting assistant-surgeon who has served honorably for a period of less than one year shall be issued a warrant showing the time for which he served and when such service was rendered; *Provided*, That no back pay or allowance be made to any such acting assistant-surgeon by virtue of this act.

**Protest Against Antivivisection Bill.**—Senator Gallinger, of New Hampshire, the advocate of antivivisection in the United States Senate, has been interviewed by a correspondent of the Baltimore *Sun*, and, according to the published report, expressed the views given in the following letter by Dr. W. W. Keen. One or two of the statements appear to be the reporter's natural inferences from Senator Gallinger's remarks, but the others are quoted as his own words. Dr. Keen's reply is a full and satisfactory reply to the Senator's libelous utterances, and should outweigh them, even with lay readers. The profession owes itself a duty to everywhere personally enlighten the laity, publicly and privately, in regard to these misrepresentations.

*To the Editors:*—In *The Sun* of April 16, under the title "Scalpel of Death," is an interview with Senator Gallinger, signed by your Washington correspondent, "F. A. R.," the statements of which I should not ordinarily feel called upon to notice. But inasmuch as they are made by a Senator of the United States and the sponsor for two bills on vivisection now before the Senate I deem it a duty to correct the erroneous impression which would be produced by the article were it passed over in silence.

Senator Gallinger has not been a practitioner of medicine for a number of years. I am sure that were he familiar with the progress of medicine and especially of surgery, within the last twenty years he would not have stated that "the belief was expressed by competent authority (?) that little real benefit had come from all the mass of the more horrible experiments."

Two statements, however, in the interview are so entirely wrong that I wish especially to call attention to them. Senator Gallinger says that American physicians should not "object to the inspection and regulation which the accomplished and able faculty of England accept without question or remonstrance." As a matter of fact, almost the entire profession of Great Britain have protested and remonstrated against their existing act. At the recent hearing on the antivivisection bill before the committee, of which Senator Gallinger himself was chairman, Professor Welch, of Baltimore, presented letters from Lord Lister, Sir Michael Foster, M.P., Sir T. Lauder Brunton and Sir T. Grainger Stewart, four of the leading medical men in Great Britain, representing the surgeons, physiologists and physicians, who showed how obstructive to progress the British law is and how deleterious such a law would be if enacted in this country.

The other statement by Senator Gallinger however, is still more indefensible; namely, "Not only in foreign countries, but in the United States, human vivisection has been practiced to a considerable extent; children and women in charity hospitals being inoculated with loathsome diseases for the sole purpose of watching them suffer and die." The only evidence as to human vivisection which was alluded to at the hearing was a pamphlet published by the miscalled "American Humane Society," dealing (in many cases with singular inexactness) with all the instances which their dragnet has been able to cull from the medical literature of the world. Instead of human vivisection being practiced "to a considerable extent," that pamphlet could give only two instances of anything resembling experiments on human beings in this country—one in Massachusetts and one in Maryland. The first was a series of experiments on puncture of the spinal cord; the other on the use of thyroid extract. Even these in my opinion were reprehensible. The others mentioned in the pamphlet alluded to were expressly condemned by Dr. Osler, myself and others at the time of the hearing. Not a single instance of the "inoculation of children or women with loathsome diseases" in the United States was adduced. The whole impression of the interview upon the public is that human vivisection and the inoculation of loathsome diseases is not uncommon in the United States. How far this is from the real truth I have stated.

It is strange that Senator Gallinger has introduced a bill for the "regulation of scientific experiments on human beings in the District of Columbia." Regulation implies certainly approval of such experiments under stated conditions, as is indicated throughout the bill. The medical profession as such utterly repudiates any such experiments on human beings, which Senator Gallinger seems to approve. Moreover, it is difficult to conceive of one's regulating a thing which does not exist. In the District of Columbia not a single instance of human vivisection has occurred, nor do I believe any ever will occur. The whole object of the introduction of the bill is evidently for the moral effect which it would produce in making the community believe that there is in existence a practice which needed to be regulated and indirectly to help the antivivisectionists in their cruel campaign against humanity.

I regret very much that Senator Gallinger has made an attack upon the noble profession to which we both belong. To say that "there is an ambition on the part of many operators to make new discoveries with little regard to the percentage of fatalities under the knife," that "no chance is too desperate for the modern surgeon to take," that "conscience has very little to do with the matter as a general thing" and that patients who enter hospitals should "leave hope behind" are slanders upon the profession, which I most indignantly deny. I know the surgeons of this country well, and a more conscientious body of men I do not know anywhere. They are honest in the statement of their results; they do not hesitate to acknowledge their mistakes, and they can face their patients here and hereafter with as clean a conscience as any set of men in the country. Senator Gallinger must have been singularly unfortunate in his relations with medical men to have formed so low an opinion of their moral character. Yours very truly,

W. W. Keen,
President American Medical Association.

**Sanitation in Porto Rico.**—General Orders, No. 80, Department of Porto Rico, April 12, 1900, is devoted to sanitary matters. A nuisance is defined as any object or condition which is prejudicial to public health. Illustrations are cited: Dead animals in streets or yards, slaughter-house offal or other decomposing matter, an infected house, overflowing and leaking privies and water-closets, manure pits, filthy or insecure tenement houses, filthy markets, groceries, dairies, cellars, yards, alleys or streets, defective drains, filthy stables, foul wells used by the public, open sewers in which the water stands, and ponds or pools of stagnant water. Soap making, bone boiling and some other industries may be designated offensive, but they are not necessarily prejudicial to public health. The order prescribes the method of making complaint of the existence of a nuisance and the action to be taken thereon. Paragraphs 8 to 12 are intended for the regulation of water-closets, privies, sinks and cess-pools. Thus a privy vault must be constructed for every building which is situated on an unsewered street, and each vault must be not less than four feet in diameter and ten feet deep in the clear, lined and floored with a wall of hard brick nine inches in thickness, laid in cement mortar and proved to be water-tight. Plans of proposed sewerage systems must be approved by the Superior Board of Health before construction will be authorized by the governor. Several of the paragraphs relate to street cleaning, for which local boards must make proper provision. Streets must be swept and cleaned three times a week. It is forbidden to throw filth, garbage, dead animals, or solid or liquid waste of any kind into the streets. These must be placed in boxes or other receptacles, which will be emptied by the public scavengers. Each owner, or agent, is held responsible for any violation of these requirements in front of his property. District courts have jurisdiction in cases arising under this order.

**Outcome of Suit Against Physician.**—Dr. T. Gillebert, of

Laerne, Belgium, was consulted several times at his office in 1892 by a former patient, who complained of anemia, concealing her pregnancy, and paying for each consultation at the time. A few months later she sued him for having taken advantage of her during a syncope and rendered her pregnant. The local tribunal acquitted him at once of the charge, but the higher court reversed this decision, without summoning a single witness, and condemned the physician to three years in prison. Since his release he has devoted himself to the task of securing a revocation of the decree, and without money or influence he has at least succeeded in obtaining a formal revocation of the decre of the higher court and his complete rehabilitation. The *Gaz. Méd. Belge* calls on the profession at large to imagine the sufferings of this innocent confrère during these eight years, and to congratulate him on his successful struggle for justice.

**An Old Practitioner.**—The oldest practitioner of medicine in the United States is claimed by the N. Y. *Commercial Advertiser* to be Dr. John P. Wood, of Coffeyville, Kan. He is in his ninety-ninth year, and still devotes a large part of each day to his profession. Seventy-six years ago he began his duties in Georgetown, Ky., and subsequently helped to lay out the city of Lawrence, Kan. As United States Commissioner he was twice called on to decide charges against John Brown, whom he discharged in both cases, believing him to be insane.

# Queries and Minor Notes.

## MEDICAL BENEVOLENCES.

EAU CLAIRE, WIS., May 23, 1900.

*To the Editor:*—Can you send me the bibliography of medical benevolences? The matter is often referred to in THE JOURNAL, but no bibliography has appeared since my subscription began. I and the relation of city physicians to charity organizations. Very respectfully yours, J. M.

ANSWER:—The bibliography of medical charities is too extensive for us to be able to furnish it even in small part. As regards the especially refer to the formation, use and abuse of free dispensaries use and abuse of free dispensaries, the literature is rapidly increasing. A rather noteworthy article appeared in the May number of the *Brooklyn Medical Journal*, on this subject, and there is hardly a month goes by that something is not written on it. A popular exposition of the subject was made by Dr. George F. Shrady, in the *Forum*, in 1897. *A city physician as an official rarely has to do* with private dispensaries or with any medical charities other than some of the public ones.

## PRETENDING OPTICIANS.

GEORGETOWN, OHIO, May 23, 1900.

*To the Editor:*—Will you inform me as to the law concerning the "Pretending Opticians" that are traveling over the country trying to refract and treat defective sight and errors in refractive power? These are ordinary laymen fitted out with a trial case of lenses. Should there be a law to prevent, to whom should one make complaint? Yours truly, H. P. S.

ANSWER:—The status of these unqualified opticians varies according to the state: unless the law is explicit they may find a way of escaping its provisions. In Ohio, however, the law seems to us sufficiently strict to cover these cases, as it mentions as coming under its provisions any one who shall "prescribe or recommend for fee for like use any drug, medicine, appliance, application, operation or treatment of whatever nature for the cure or relief of any wound, fracture, bodily injury, infirmity or disease." The secretary of the State Board of Medical Registration is charged with the execution of the law, and should be communicated with in regard to the matter, for further information.

# The Public Service.

## ARMY CHANGES.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., May 18 to 24, 1900, inclusive:

Henry P. Birmingham, major and surgeon, U. S. A., member of a retiring board convened at Manila, P. I.

Robert E. Caldwell, acting asst.-surgeon, from the transport *Rosecrans* to duty in the Department of California.

James Carroll, acting asst.-surgeon, from Washington, D. C., to New York City, and thence to Quemados, Cuba, on special business pertaining to the medical department.

Thomas E. Evins, major and surgeon, 49th Inf. Vols., discharged from service upon tender of his unconditional resignation, to take effect May 24, 1900.

Leigh A. Fuller, lieutenant and asst.-surgeon, U. S. A., member of a promotion board convened at Fort Monroe, Va.

James H. Halloway, acting asst.-surgeon, relieved from duty on the transport *Sheridan* to proceed to Seattle, Wash., for duty on the transport *Rosecrans*.

Herbert I. Harris, acting asst.-surgeon, from Walker, Minn., to duty at Fort Snelling, Minn.

Philip F. Harvey, major and surgeon U. S. A., member of an examining board at San Francisco, Cal.

William P. Kendall, major and surgeon, Vols., member of a retiring board convened at Manila, P. I.

James M. Kennedy, captain and asst.-surgeon, U. S. A., relieved from duty on the examining board at San Francisco, Cal.

Fred S. Macy, acting asst.-surgeon, from Somerville, Mass., to San Francisco, Cal., for duty in the Department of California.

Edward B. Moseley, major and surgeon, U. S. A., member of a retiring board convened at Manila, P. I.

Robert M. O'Reilly, lieut.-col., deputy surgeon-general, U. S. A., member of a promotion board convened at Fort Monroe, Va.

Eduardo C. Poey, acting asst.-surgeon, member of an examining bard at Fort Riley, Kans.

Francis J. Pursell, acting asst.-surgeon, from Utica, N. Y., to duty in the Department of California.

Walter Reed, major and surgeon, U. S. A., from Washington, D.C., to New York City, and thence to Quemados, Cuba, on special business pertaining to the medical department.

William Roberts, acting asst.-surgeon, from Washington, D. C., to Tampa, Fla., and thence to Havana, Cuba, for duty in the division of Cuba.

*Maxwell S. Simpson, acting asst.-surgeon*, leave of absence extended.

W. R. Van Tuyl, acting asst.-surgeon, relieved from duty on examining board at Fort Riley Kans.

BOARD CONVENED.

On May 24, 1900, the following order was issued: By direction of the Secretary of War a board of medical officers is appointed to meet at Camp Columbia, Quemados, Cuba, for the purpose of pursuing scientific investigations with reference to the infectious diseases prevalent on the Island of Cuba. Detail for the board: Major Walter Reed, surgeon U. S. A.; Acting Asst.-Surgeon James Carroll, U.S.A.; Acting Asst.-Surgeon Aristides Agramonte, U.S.A.; *Acting Asst.-Surgeon Jesse W. Lazear, U. S. A. The board will act* under general instructions to be communicated to Major Reed by the surgeon-general of the army.

## NAVY CHANGES.

Changes in the Medical Corps of the Navy for the week ended May 12, 1900.

Surgeon G. P. Lumsden, ordered to the *Kentucky* May 15, 1900.

Asst.-Surgeon G. F. Freeman, detached from the Naval Hospital, Washington, D. C., May 10, and ordered to the *Essex*

*Asst.-Surgeon C. H. DeLancy, detached from the Essex* when relieved, and ordered to the Naval Hospital, Washington, D.C.

P. A. Surgeon S. G. Evans, ordered to the *Kentucky* May 15, 1900.

P. A. Surgeon W. C. Braisted, detached from the *Detroit* when put out of commission and ordered home and to be ready for orders to sea.

## MARINE-HOSPITAL CHANGES.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the seven days ending May 17, 1900.

Surgeon H. W. Austin, detailed as member of Board of Examiners convened to meet at New York City, May 23, 1900, for the examination of candidates for appointment as assistant-surgeon in the U. S. M. H. Service.

Surgeon G. W. Stoner, relieved from duty as member of Board of Examiners convened to meet at New York City, May 23, 1900, for the examination of candidates for appointment as assistant-surgeon in the U. S. M. H. Service.

Surgeon F. W. Mead, granted leave of absence for one day.

Acting Asst.-Surgeon R. E. L. Burford, granted leave of absence for seven days.

Acting Asst.-Surgeon L. P. Gibson, granted leave of absence for five days.

Acting Asst.-Surgeon G. A. Gregory, granted leave of absence for four days from May 11, 1900.

Acting Asst.-Surgeon J. A. Moncure, to proceed to the Brunswick, Ga., quarantine station, for temporary duty.

Acting Asst.-Surgeon W. J. O'Reilly, granted leave of absence for three days from May 22, 1900.

Acting Asst.-Surgeon J. G. Stanton granted leave of absence for twenty-two days from May 16, 1900.

BOARD CONVENED.

Board convened to meet at New York City, May 23, 1900, for the examination of candidates *for appointment as assistant-surgeon*, U. S. Marine-Hospital Service. Detail for the Board: Surgeon George Purviance, chairman; Surgeon G. W. Stoner, Surgeon G. T. Vaughan, recorder.

APPOINTMENTS.

Fiber, Albert W., appointed acting assistant-surgeon, U. S. M.-H.S., for duty at Toledo, Ohio, from May 1, 1900.

Schurrer, L. T., appointed acting asst.-surgeon, U.S.M.-H.S., for duty at Lexington, Mich., from May 14, 1900.

RESIGNATIONS.

Acting Asst.-Surgeon W. H. Fisher, resigned to take effect April 30 1900.

CASUALTY.

Asst.-Surgeon S. R. Tabb, died at Savannah, Ga., April 30, 1900.

## CHANGE OF ADDRESS.

Dr. G. N. Bennett, from Kingsville to Blue Springs, Mo.

Dr. J. F. Barbrick, from Atlanta, Ga., to 52 Waverly St., Everett, Mass.

Dr. A. Breathwit, from Ogemaw to Kingsland, Ark.

Dr. A. W. Chase, from 98 Columbia St. E., Detroit, to 103 Church St., Adrian, Mich.

Dr. A. L. Chapman, from 1711 Canal St., New Orleans, to Lake End, La.

Dr. G. S. Dowell, from Chillicothe to Braymer, Mo.

Dr. J. U. Fauster, from Paulding to Archbald, Ohio.

Dr. G. A. Flippin, from Chicago, Ill., to Dermott, Ark.

Dr. C. O. Goulding, from 6202 Penn Ave. to [illegible] Shady Ave., Pittsburg, Pa.

Dr. L. S. Greene, from Louisville, Ky., to Burnt Mills, Miss.

Dr. B. Getzlaff, from Grand Haven to 126 Division St., Benton Harbor, Mich.

Dr. O. M. Hayward, from Nashville to Graysville, Tenn.

Dr. R. D. Long, from Chicago, Ill., to Lorenzo Marquez, Pretoria, S. A.

Dr. F. M. Laubach, from Wilkes Barre to Weaversville, Pa.

Dr. W. D. Lockwood, from South St. Joseph to Sta. D., St. Joseph, Mo.

Dr. R. E. Lowe, from Kansas City, Mo., to Independence, Kan.

Dr. W. J. McRoberts, from 417 S. Garrison St., St. Louis, to Jefferson City, Mo.

Dr. R. E. Mason, from 450 Walker St. to Lamar Hospital, Augusta, Ga.

Dr. J. L. McCarthy, from 1024 So. 10th St., Omaha, to Gretna, Neb.

Dr. H. C. Miner, from 630 to 833 Kansas Ave., Topeka, Kan.

Dr. H. M. Morrow, from 42 Laflin St. to 169 Ashland Boul., Chicago, Ill.

Dr. S. L. McElroy, from Norcross to Kirkland, Ga.

Dr. J. T. Nagle, from 47 E. 21st St. to 17 Park Row, New York, N. Y.

Dr. H. G. Norton, from 1609 4th St., Minneapolis to St. Luke's Hospital, St. Paul, Minn.

Dr. W. P. Reaves, from Sewanee Med. Col. Bldg. to Sewanee, Tenn.

Dr. A. Rud, from Park Ave and Ohio St. to 136 N. Central Ave., Austin Ill.

Dr. A. J. Richter, from 6250 Halsted St., Chicago, Ill., to Bluthenthal Hotel, Pine Bluff, Ark.

Dr. R. L. Shea, from New York City to Westerly, R. I.

Dr. G. O. Switzer, from Pentwater to Greenland, Mich.

Dr. J. Spaulding, from Clinton to Decatur, Ill.

Dr. H. J. Tillotson, from St. Louis to 701 Main St., Kansas City, Mo.

Dr. H. E. Thomason, from Westville to Grove, I. T.

Dr. J. Vermeulen, from Beaver Dam to Fremont, Mich.

Dr. J. L. Williamson, from Lowell, Ark., to Lacasa, Texas.

Dr. DeForest Willard, from 1601 Walnut St. to 1818 Chestnut St., Philadelphia, Pa.

Dr. J. Wallace, from Milton, N. H., to 2773 Washington St., Roxbury, Mass.

Dr. D. H. Williams, from 3301 to 3149 Forest Ave., Chicago, Ill.

Dr. C. H. Wheaton, from 95 Evanston Ave. to 42 E. Madison St., Chicago, Ill.

Dr. W. M. Young, from Itasca to Dallas, Texas.

## Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

### Boston Medical and Surgical Journal, May 17.

1.—*Ideal Ration for an Army in the Tropics. (*Continued.*) E. L. Munson.
2.—*Study of the Nature and Significance of Symptoms in Disorders of the Stomach. Henry F. Hewes.
3.—*Case of Pernicious Vomiting of Pregnancy. E. L. Twombly.
4.— Bicornate Uterus, with Twin Pregnancy; Abortion from One Horn. Charles H. Winn.
5.— Case of Pernicious Vomiting of Pregnancy. H. S. Knight.
6.—*Question of Supernumerary Fallopian Tubes; With Specimens of Fallopian Tubes with Supernumerary Ostia. Agnes C. Victor.

### Medical Record (N. Y.), May 19.

7.—*When Shall we Operate for Appendicitis? Joseph Wiener, Jr.
8.—*1. On a Peculiar Variety of Pathogenic Streptococci. 2. On a Peculiar Property Possessed by (at least some of) the Pathogenic Bacteria: Preliminary Communication. E. Libman.

### New York Medical Journal, May 19.

9.—*Study of Blood in Cancer of Stomach. Thomas McCrae.
10.— Cystitis. (*Concluded.*) Henry H. Morton.
11.—*Estivo-Autumnal Fever in New Orleans. (*Continued.*) H. A. Veazie.
12.—*Genesis of Antitoxins. Justin D. Lisle.
13.—*Physical Training in School and Home. (*Continued.*) Henry S. Pettit.
14.— Trachoma. Norburne B. Jenkins.

### Philadelphia Medical Journal, May 19.

15.—*Common Colds: Their Cause, Prevention and Treatment. D. H. Bergey.
16.—*Intestinal Indigestion and its Consequences. Wm. Henry Porter.
17.—*Gastric Analysis. Albert Philip Francin.
18.—*Case of Acute Gonorrhea by Mercurol Irrigations. Ferd. C. Valentine.
19.—*Rupture of Plantaris Muscle. John H. Gibbon.
20.— Case of Chronic Pneumonia. Malcolm S. Councill.

### Medical News (N. Y.), May 19.

21.— Status of Gynecology in 1876 and 1900. Alex. J. C. Skene.
22.—*The Pharmacopeia of 1900. Horatio C. Wood.
23.—*Treatment of Suppurative Otitis Media in Young Children. George L. Richards.
24.— Fibroid Tumor of Uterus; Enteroptosis; Retroversion; Ruptured Perineum-Operations; Recovery. Matthew D. Mann.

### Cincinnati Lancet-Clinic, May 19.

25.— Valedictory Address before the Miami Medical College. Joseph Eichberg.
26.—*Ophthalmic Memoranda. David DeBeck.

### Medical Review (St. Louis, Mo.), May 19.

27.— Chairman's Address before the Southern Section of American Laryngological, Rhinological and Otological Society. J. A. Stucky.
28.—*Epidemic Cerebrospinal Meningitis; A Clinical and Bacteriologic Study of Thirty-four Cases. R. B. H. Gradwohl.

### Archives of Pediatrics (N. Y.), May.

29.—*Ambulatory and Hospital Management of Gastrointestinal Derangements of Infancy in Summer Months among the Poor of Large Cities. Henry Koplik.
30.—*Care of Premature Babies in Incubators. James D. Voorhees.
31.— Tuberculosis of Female Genital Tract in Children. Martha Wollstein.
32.— Application of Rational Surgical Technique to Removal of Foreskin. Leonard W. Bacon, Jr.

### Alienist and Neurologist (St. Louis, Mo.), April.

33.—*Analysis of the Sexual Impulse. Havelock Ellis.
34.— Circumscribed Median Nerve Digital Neuritis Sequent to La Grippe. C. H. Hughes.
35.— Outline of Psychiatry in Clinical Lecture. (*Concluded.*) C. Wernicke.
36.— Diagnosis of Raynaud's Disease. Adolf Calmann.
37.— Research in Comparative Cytology of Nervous System of Vertebrates. Guiseppe Levi.

### Bulletin of the Johns Hopkins Hospital (Baltimore, Md.), April.

38.— Unusual Method of Performing Hysteromyomectomy. Otto G. Ramsay.
39.— Squamous-Celled Carcinomatous Degeneration of Ovarian Dermoid Cyst; also Adenocarcinoma of Ovary, Associated with Ovarian Dermoid Cyst. Lindsay Peters.
40.— Pulmonary Tuberculosis, with Diffuse Pneumonic Consolidation, in a Lion. W. G. MacCallum and A. W. Clement.
41.— Arsenical Pigmentation and Keratosis. Louis P. Hamburger.
42.— Uncontaminated Urine. Howard A. Kelly.
43.— Note on Series of New Vesical Specula. Howard A. Kelly.

### Archives of Otology (N. Y.), February.

44.—*Series of Cases of Suppurative Disease of Temporal Bone, with Comments. Swan M. Burnett.
45.— Excessive Hemorrhage, Following the Removal of a Myxofibroma from Ear. Clarence R. Dufour.
46.— Facial Paralysis as Complication of Acute Otitis Media. Wm. R. Murray.
47.—*Rinné and Gellé Tests. Gustav Brühl.
48.— Method for Functional Examination of Diseased Ears. Fr. Bezold.
49.— Case of Cerebral Abscess Following Purulent Inflammation of Middle Ear; Operation; Evacuation of Abscess; Death. Charles H. May.
50.— Fatal Otitic Abscess in Left Temporal Lobe of Brain Causing Word-Blindness. Operation. Autopsy. Herman Knapp.

### Laryngoscope (St. Louis, Mo.), May.

51.—*Etiology of Chronic Atrophic Rhinitis. Francke H. Bosworth.
52.—*Some Recent Contributions to Study of Etiology and Pathology of Atrophic Rhinitis. Jonathan Wright.
53.—*Importance of Distinguishing Functional Collapse of the Nasal Tissues from Atrophic Rhinitis. Clarence C. Rice.
54.—*Hygienic and General Treatment of Atrophic Rhinitis. Thomas R. French.
55.—*Mechanical Treatment of Atrophic Rhinitis. D. Bryson Delavan.
56.—*Atrophic Rhinitis; Its Treatment by Local Medication. Chas. H. Knight.
57.— Report of Case of Hysterical Dyspnea. F. E. Waxham.
58.— Sigmoid Sinus Thrombosis. James F. M'Kernon.

### Therapeutic Gazette (Detroit, Mich.), April 15.

59.—*Indications for the Use of Alcoholic Stimulants in Typhoid Fever. J. H. Musser.
60.—*Intestinal Antisepsis in Typhoid Fever. J. M. Anders.
61.—*Diet in Typhoid Fever. Frederick A. Packard.
62.—*Concerning the Substitutes for Enucleation of Eyes and Preparation of Stump after Complete Enucleation, with Description of Some of the Methods which have been Advocated and Practiced. G. E. de Schweinitz.
63.— Case of Inoperable Cancer of Vagina Treated with Local Applications of Methyl Blue. H. R. Coston.
64.— Antitoxic and Surgical Treatment of Diphtheritic Laryngitis. Joseph Mullen.

### Doctor's Magazine (Chicago), April and May.

65.— Bubonic Plague. N. Kunitoma.
66.— Orlando, Florida, Winter Resort. James N. Butt.
67.— Scope of U. S. Pharmacopeia. George F. Butler.
68.— Arizona as Health Resort. A. W. Craig.
69.— Notes from My Journal. Wm. Rittenhouse.
70.— Ernest Platner: Philosopher and Physician. Frank W. Jay.
71.— Varieties, Symptoms, Diagnosis and Treatment of Neurasthenia. Rosalio M. Ladova.
72.— Doctor's Life in Mexico. Chas. E. Husk.
73.— Chronic Suppurative Osteomyelitis. T. A. Davis.

### Archives of Ophthalmology (N. Y.), March.

74— Report of Case of Orbital Cavernoma Removed by Kronlein's Method with Preservation of Eyeball. Arnold H. Knapp.
75.—*Iritis, Result of Dental Irritation. B. L. Millikin.
76.— Case of Contusion Injury of Eyeball, Followed by Fulminant Glaucoma; Recovery without Operation. H. L. Myers.
77.—*Contribution to Diagnosis, Symptomatology and Statistics of Congenital Color-Blindness. Wilibald A. Nagel.
78.— Glaucoma after Neuro-Retinitis Albuminurica. Contribution to Pathologic Anatomy of Glaucoma. Eugene Wehrli.
79.— 1. Extreme Deviation Upward and Outward of Right Eye, with Nystagmus of Left. 2. Transparent Floor of Ulcer on Large Leucoma of Cornea. V. L. Raia.
80.—*Palpebral Reaction of Pupil (Galassi). H. Gifford.

### International Medical Magazine (N. Y.), April.

81.—*Intestinal Antisepsis in Typhoid Fever. James M. Anders.
82.—*Variety in Diet of Typhoid Fever. Andrew H. Smith.
83.—*Treatment of Typhoid Fever. Frank Billings.
84.— Illustrated Clinic in Dermatology. Wm. S. Gottheil.
85.— Treatment of Typhoid Fever. David F. Woods.

**American Gynecological and Obstetrical Journal (N. Y.), May.**

86.— Personal Reminiscences Associated with Progress of Gynecology. (*Continued.*) Thos. Addis Emmet.
87.— Removal of Bladder as Preliminary to or Co-Incidental with Hysterectomy for Cancer in Order to Extend the Possibilities of Surgery for Malignant Disease of Pelvis. Franklin H. Martin.
88.— Fetal Malformation: Symelus. A. McDiarmid.
89.— Intraperitoneal Hemorrhage Considered in Relation to Ectopic Gestation. J. Clarence Webster.
90.— Malformation of Uterus. Frank T. Andrews.

**Medical Review of Reviews (N. Y.), April 25.**

91.—*Soluble Products of Fungus Parasite of Human Cancer and of Nectria Ditissima (Parasite of Cancer of Trees); Physiologic and Therapeutic Action of Nectriannin. M. Bra and M. Mongour.

**Cleveland Medical Gazette, May.**

92.—*Some of the Causes of Pain in Feet. C. A. Hamann.
93.—*Report of Cases of Syphilis of the Viscera. Chas. F. Hoover.
94.—*Plea for Examination of Male Genitals in Obscure Cases. Ferd. C. Valentine.
95.— Case of Appendicitis in which Appendix was not Found at Time of Operation or at Post-mortem. Charles B. Parker.

**Fort Wayne Medical Journal-Magazine, April.**

96.— Diagnosis of Smallpox. *Carl Proegler.*

**Canadian Journal of Medicine and Surgery (Toronto, Can.), May.**

97.—*Disease in Korea. O. R. Avison.
98.— Doctor of the Future. Albert D. Watson.
99.— Clinical Notes on Euquinin. W. R. D. Blackwood.

**St. Louis Medical and Surgical Journal, May.**

100.—*On Ischemic Paralysis and Contractors of Muscles. Augustus C. Bernays.
101.— Pathology and Diagnosis of Exophthalmic Goiter. Emory Lanphear.
102.— Medical Treatment of Exophthalmic Goiter. Floyd Stewart.
103.— Treatment of Gonorrhea in Females. Eugene C. Underwood.
104.— Regarding Pre-Columbian Leprosy. Phil H. Polakowsky.

**Maryland Medical Journal (Baltimore), May.**

105.— Cystitis Caused by Bacillus Pyocyaneus. Thomas R. Brown.
106.— Study of "Christian Science." Harry T. Marshall.
107.— Some Interesting Cases of Mastoiditis. H. O. Reik.
108.— Case of Measles, Scarlet Fever, Diphtheria, Otitis Media, Mastoiditis, etc. Herbert Harlan.

**American Medical Compend (Toledo, Ohio), May.**

109.— Address before the Toledo University Club. B. Becker.
110.— Examination of Blood in Disease. M. H. Bowman.
111.— Microchemistry. Park L. Myers.
112.— Acute Anterior Poliomyelitis. H. E. Smead.

**Yale Medical Journal (New Haven, Conn.), May.**

113.— Abortion before the Fourth Month. William S. Stone.
114.—*Smallpox in Porto Rico. S. H. Wadhams.
115.—*Sprains. S. H. Huntington.

**Memphis Medical Monthly, May.**

116.— Heredity. D. E. Nelson.
117.—*Anatomy and Pathology of Rectal Valves. A. B. Cooke.
118.— Salient Points of Appendix Operations. R. E. Fort.
119.— Educating the Public in Care of Their Teeth. M. M. Haltom.
120.— Surgical Case. Battle Malone.

**Virginia Medical Semi-Monthly (Richmond), April 27.**

121.— True Function of State Medical Examining Board. Allard Memminger.
122.— Clinical Report of a Few Select Cases: 1. Gonorrheal Pneumonia; 2. Septic Lyphangitis of Thigh from Scratch on Foot; 3. Typhoid Toxemia in Malarial Fever; 4. Gunshot Wound of Abdomen; Recovery; with Remarks. John R. Hicks.
123.— Treatment of Constipation by Electricity. Francis B. Bishop.
124.—*Some Points of General Interest in Regard to Drug Addictions. C. C. Stockard.
125.— Pulmonary Tuberculosis: Its Prevention and Treatment. David R. Fly.
126.— Etiology and Diagnosis of Idiopathic Fevers. F. M. Brantly.
127.— Duty of Medical Profession and State to Christian Science Healers. P. R. Cortelyou.

## AMERICAN.

1. **Army Ration in the Tropics.**—Munson continues his paper on the army ration, showing that in the tropics the needed amount of protein and nitrogen is less than that required in the more temperate climates. A vegetable diet is largely adopted by the tropical residents and it contains much less rich nitrogenous constituents than the vegetable foods indigenous to the temperate zone. It has been noticed that the resident whites in Java adapt their food so as to have a decided reduction of protein as well as fats, which are clearly not required for the support of animal heat to the same extent as in northern regions; an excess of nitrogenous foods is apt to overtax the liver, and it is evident that for the troops serving in the tropics these may be safely and advantageously reduced. It is preferably done at the expense of the meat component, which, besides protein, contains a considerable proportion of fat. It is not desirable to have a complete fall to the nitrogenous level of the tropical native, since the single nutrient standard for the military service must contain the elements necessary to repair the loss incident to great physical efforts. Therefore, the protein allowed for the soldier in active service must be somewhat greater, and it is probable that the daily allowance of nitrogen can not safely be reduced below 16 grams, represented by 100 grams of protein, even though this amount is in considerable excess of the normal for the corresponding native class of the tropics. (See also abstract in The Journal of May 26, ¶ 25, p. 1364.)

2. **Stomach Disorders.**—Hewes' reports the examination of a large number of cases of stomach disorders, and thinks that there are certain common symptoms which are present in practically all cases, including those in similar and opposite objective findings. This leads to the conclusion that all causes affecting the stomach will produce, as a part of the symptomatology of the function they bring about, certain common symptoms which are manifestations of the nature or *habit* of the stomach when disturbed, rather than manifestations of special reactions to special causes of disturbance. One of the most prominent of these symptoms is distress in the form of pain, nausea, burning sensations or a sense of weight or fulness, which may be the total symptomatology in many cases. Whether they are attended with hypoacidity or hyperacidity, the extent of this symptom-habit is somewhat hypothetic. In some we may assume that hyperesthesia exists, and in others it may be considered as the manifestation of the organ, working to perform its function under untoward conditions making a sort of stomach strain.

3. **Pernicious Vomiting of Pregnancy.**—Twombly reports a case of fatal vomiting of pregnancy, from which he draws the conclusion that the delay so generally advised is frequently extremely perilous. The indications for emptying the uterus are given by him as: 1, inability to retain any food taken by the mouth; 2, intolerance of rectal enemata; 3, more or less albuminuria; 4, progressive emaciation; 5, headache constant; 6, frequent and feeble pulse; 7, a certain apathy of the patient.

6. **Supernumerary Fallopian Tubes.**—The question of supernumerary Fallopian tubes is discussed by Victor, who takes as her text a case of supernumerary ostia. She advances as a theory for the origin of these anomalies that they are the reversion to a former avian condition.

7. **Appendicitis.**—Wiener calls attention to the dangers of general peritonitis from appendicitis as shown by the statistics of the Mt. Sinai Hospital for the last five years, and notices cases that are instructive in regard to the management of the latter. He does not believe in any fixed rule as to operation, but thinks it is important that the removal of the appendix should be performed if pain continues after an acute attack. He summarizes as follows: 1. Not every case of appendicitis should be operated on. 2. After a first mild attack, regulate the diet and salines. 3. After a first severe attack remove the appendix. 4. After two or more mild attacks, operate. 5. In an acute attack: *a.* Do not give opium nor morphin. *b.* Operate during an attack—1, if a chill manifests itself; 2, if the pain is severe enough to require morphin; 3, if the pulse is very small, rapid or irregular; 4, if there is persistent vomiting; 5, if there is persistent rigidity of the abdominal wall; 6; if an abscess can be felt; 7, if the general condition makes it imperative; 8, if in doubt. He says that it is a mistake to think that every case of appendicitis comes under these headings, though a great majority will be found to do so; and if every patient was operated on early the mortality would be reduced. This can be also be done by exercising care and discrimination in deciding when to operate.

8. **Peculiar Variety of Pathogenic Streptococci.**—Libman describes a form of strepcoccus which differs from others in the fact that when grown on glucose-agar, the whole agar became whitened, although the growth was confined to the surface. The same happened with lactose-agar, but not with saccharose-agar. By growing the organism on the glucose-agar, to which some hydrocele fluid had been added, the medium became absolutely white. Anaerobically a similar result could be obtained with serum medium only. The whitening of the media seems to depend on the production of an acid —lactic or one closely allied—which precipitates the albumin of the media. The organism is pathogenic for mice, producing

gastro-enteric inflammation. While working on this organism, he tried to find out whether or not other bacteria would produce the same phenomena and to his surprise found that a large number of the pathogenic bacteria can precipitate albumin in the presence of glucose; that in a general way, the results seem to depend on the amount of acid produced, as pneumococci, alone, among those tested, did not have this property. Many bacteria also precipitate egg-albumin, and most of them, serum-albumin in the presence of .1 per cent. of glucose—the amount present in the normal blood. The saprophytes thus far tested, not including the proteus group, do not seem to have this quality. The growth of most of the bacteria used in the experiments, including pneumococci, on a medium consisting of glucose-agar to which some serum had been added, was far in excess of these growths on any other. These facts are important in regard to infections, especially in diabetes.

9. **Cancer of the Stomach.**—Osler and McCrae have examined the condition of the blood in 62 or more cases of cancer of the stomach and found that a blood count below 1,000,000 red blood-corpuscles is strongly in favor of pernicious anemia. While nucleated red blood-corpuscles are present in all very severe anemias, megaloblasts rarely occur in cancer of the stomach. Neither an increase in the leucocytes nor special variations in the form appear to be of any moment in the diagnosis of this condition and the presence or absence of digestion leucocytes is too uncertain to be of much assistance.

11. **Estivo-Autumnal Fever.**—Veazie discusses the origin, symptomatology and diagnosis of this form of malaria, which he thinks is frequently confounded with yellow fever. Differences in the symptoms exist, but they are unreliable, and only give presumptive evidence when this form of malaria assumes malignant features. The principal differences are that pain in the limbs is confined more to the knees and calves of the legs, that the expression of the face is that of pain and dulness instead of excited and anxious, as in yellow fever, and that the pupils are normal instead of contracted. The tongue is usually covered with a yellowish coating, while in yellow fever it is sometimes not coated at all. In autumnal fever the liver and spleen are tender, there is loss of appetite, and the bowels are sometimes loose; all of which symptoms are unlikely to be seen in yellow fever. Black vomit is common to both and the only reliable and safe course to pursue in the diagnosis is to find the parasite and give a few doses of quinin; then if it is absorbed, the temperature will fall almost to normal and the patient feel well.

12. **Antitoxins.**—The origin of antitoxins is treated by Lisle, who rejects the theory that they are derived from toxins. This theory receives its final blow from Madsen's investigations; he found diphtheria antitoxin in a perfectly healthy horse which had never been inoculated. It must therefore be a product of the animal body, but how produced is a mystery.

13. **Physical Training in School and at Home.**—The importance of physical education is discussed by Pettit, who points out that the systematic training in the gymnasiums is adapted particularly to naturally weak, puny individuals, who are not able to enter into the games of their playmates. He describes a method of taking measurements, as a guide to treatment and a means of furnishing statistics as to the ideal man; he does not believe, however, in using it systematically, on account of the time it takes, and because the physical director can tell by observation where a person is lacking.

15. **Common Colds.**—From a study of the subject, Bergey believes that common colds are caused by infection of the mucous membrane of the upper respiratory tract by pathogenic bacteria, which in neglected cases may invade the system and lead to serious results; and that consequently these diseases should never be regarded as trivial. So far no specific bacteria have been isolated; the ordinary pus germs and those producing pneumonia are specially mentioned as probably the most common. The etiologic factors of these diseases are such as endanger the health of every person coming in contact with the sufferer, and these disorders should be regarded as infectious, even though they become chronic. Recognizing this fact, he thinks that it is important to prevent, as far as possible, the association of the well with those having colds, especially among children in public schools.

16. **Intestinal Indigestion.**—Porter describes the oxidation processes in the system, explaining the production of hemoglobin and lecithin in the physiologic economy. He also calls attention to the fact that the presence of certain kinds of bacterial life is probably essential to normal digestion and reports the experiments of Schottelius, in opposition to those of Nuttall and Thierfelder, as demonstrating this, but to determine what kinds are the essential ones would require a very extensive study. It is fortunate that Nature has allowed a wide margin of indulgence in the food products taken, because otherwise it would be impossible to secure anything like a fair standard of health. The chief causes of intestinal indigestion are of two kinds: 1, the presence of abnormal micro-organisms and putrefactive changes produced by their presence; 2, taking more food than can be properly managed and that of faulty composition. To this may be added, as secondary causes, the environments, exercise, mental state, nervous condition, climatic influence, etc. Under ordinary circumstances, however, the normal micro-organisms and the digestive secretions will naturally counteract the pathologic ones. A well-regulated mixed diet is one that contains a due proportion of all the essential elements of both the animal and vegetable kingdoms. No one of these, however, is perfectly adjusted; milk comes the nearest to being the universal food, but it has its defects as such. Vegetables require a large bulk to secure the absorption of a proper amount of proteid substances, and their advantage is in containing a high percentage of nucleo-albumin as compared with the animal foods. The liberal use of fruits may excite abnormal fermentation, as many of them are eaten before ripe, and in their raw state are often laden with micro-organisms, and in a state of partial decomposition. The meat diet is defective in the glucose compounds, but when used in its true sense, including all animal products, furnishes everything in the required proportion except the nucleo-albumin. A vegetable diet, when used accurately, excludes the use of any animal product, even in cooking, and this makes it almost impossible to get a properly proportioned combination. (See also abstract in THE JOURNAL of May 26, ¶ 6, p. 1362.)

17. **Gastric Analysis.**—Francin's paper gives the details of the methods of gastric analysis.

18. **Gonorrhea.**—Valentine reports a case treated by mercurol irrigation in which the gonococci disappeared definitely on the second day, and, after the fifth irrigation the discharge was reduced from a free yellow flow to a pinhead drop, by one irrigation of 5 per cent. mercurol. The urine became clear after the first irrigation, while the burning produced by the mercurol continued for three days after each irrigation, and occurred to a slight degree after several subsequent ones, and was associated in most instances with frequent imperious urination. He believes that we can not succeed in doing what quacks claim they can, cure a case in three or even eight days, but that this is an advance on previous methods.

19. **Rupture of the Plantaris Muscle.**—The case reported is that of a man who, while playing tennis, was suddenly seized with a pain in the calf of the left leg, followed by weakness, pain and great difficulty in walking. The case typically illustrates the symptoms of rupture of the plantaris muscle—sudden pain above the middle of the calf, where the muscle joins its tendon, inability to walk except with parts held stiff and toes everted, swelling, and greater pain and ecchymosis later. The treatment is immediate rest and moderate compression, with massage and an elastic bandage later; it is not necessary to put the leg up in a plaster dressing, unless some of the larger muscles are injured.

22. This paper has appeared elsewhere: See THE JOURNAL of May 19, title 14, p. 1248.

23. **Suppurative Otitis Media in Young Children.**—The frequency of suppuration of the middle ear in young children is noted by Richards, and his method of treating the condition detailed. If the suppuration has lasted for some time and the discharge is foul and the caries well marked, he syringes with warm, sterile water, or with a solution of 1 to 5000 bichlorid until all the debris is removed, when the canal is dried and the ear inspected. If there is much destruction of the tympanic membrane, he applies peroxid of hydrogen on a cotton pledget,

and after again drying, a saturated solution of boric acid in from 40 to 90 per cent. of alcohol—in young children seldom over 50 per cent. He next dusts the whole surface lightly with powdered boric acid, or some such drying powder, and then stops the ear with a narrow, small wick of iodoform, or other antiseptic gauze, taking care that it reaches the bottom of the canal. If the process is more acute and the perforation small, neither the peroxid of hydrogen, the boric-acid alcohol, nor the powder is used, but simply a thorough cleansing through an opening into the drum membrane that is large enough to secure drainage, with the insertion of gauze wick or cotton pledgets that are frequently changed; if the opening is not large enough, he incises at the posterior inferior quadrant of the drum membrane. This completes the office treatment; and for the home treatment, which is equally important, he instructs the mother or attendant in regard to the anatomy, and fully explains how to use the cotton pledget, which is to be inserted at a depth that will reach the bottom of the canal without doing injury, and clean it; this to be continued until the tip of the pledget is no longer moist. Then she is to take as much of the powder ordered as will go on the tip of a small penknife, and blow it into the ear through a bit of tubing. If the suppuration is a good-sized one and considerable caries is present he frequently has boric-acid alcohol drops used at home also. Finally he instructs how to insert a small narrow pledget tip in the ear and leave it there, changing it from one to three times daily, then he sees the child again in from three to seven days. This method he finds decidedly successful.

26. **Ophthalmic Memoranda.**—DeBeck describes cases of orbital abscess in la grippe, uremic blindness during pregnancy, rheumatic effusion into the vitreous, rheumatic iritis, retrobulbar neuritis after a burn, a peculiar case of fracture of the orbital floor and also a case of ring scotoma.

28. See abstract in THE JOURNAL of Dec. 23, 1899, p. 1616.

29. **Management of Summer Complaint in Infants.**—Koplik believes that in a great majority of gastro-intestinal diseases, infection is the keynote, and that too little attention has been given to the examination in this regard. Its prognostic value is very great, if we know that streptococci are absent. He thinks that much good is done by carrying patients to the doctor, for the sick child is better on the street than in its home, as it gets better air; and that much attention should be given to the food. In his clinic he goes so far as to furnish water in bottles of 6 oz. capacity, necessary for the preparation of simple albumin water when the child can not take milk. He believes that hospitals are not so favorable for these cases as camping out or cottage treatment, because of the disadvantages of crowding a large number of children together in a ward or sanitarium, especially if a case of any contagious disease is discovered.

30. **Incubators.**—Voorhees discusses the care of premature infants in incubators, the best form of which he thinks is that of M. Lion, which can be disinfected rapidly and is well ventilated. He thinks the infant should be kept in the incubator until it has reached the development of full term, or longer if necessary. Its napkins should be changed from three to four times a day, only often enough for cleanliness. The feeding should be carefully adapted to the child, being gradually increased until it is every hour taking from 6 grams to an ounce of a sugar solution, with breast milk added. One great danger of the incubator is infection, as it is a breeder or germ carrier and should be regularly disinfected. The paper gives the statistics of 106 incubator infants, 77 of whom survived the fourth day. Not counting those who died in a few hours, they were able to save 66 per cent. of 6½ months children, 71 per cent. of the 7 months, 89 per cent. of the 7½ and 91 per cent. of the 8 months.

33. **Sexual Impulse.**—Ellis, after noticing the various theories, concludes that we are now in a better position to estimate and define the contents of this impulse. He says that there are, as Moll has indicated, two constituents, but instead of being unrelated or nearly so, they are so intimately connected as to form two distinct stages in the same process: A first stage, in which images, desires and ideals grow up within the mind, while the organism generally is charged with energy and the sexual apparatus congested with blood: and a second stage in which the sexual apparatus is discharged amid profound sexual excitement, followed by deep organic relief. The first process creates, or at all events intensifies, the tension which the second relieves. It seems best to call the first impulse in the process the instinct of tumescence, and the second the instinct of detumescence. The first, taking on usually a more active form in the male, has the double object of bringing the male himself into the condition in which discharge becomes imperative, and at the same time arousing in the female a similar ardent state of emotional excitement and sexual turgescence. The second instinct has the object, directly, of discharging the tension thus produced, and indirectly of effecting the act by which the race is propagated.

44. **Suppurating Diseases of Temporal Bone.**—Burnett reports a number of cases of mastoiditis, Bezold's abscess, general necrosis of the temporal bone, etc., in whites and negroes. Some years ago he reported on the rarity of dry catarrh and suppuration among the negroes, though the latter is frequent among the children; they are almost without exception badly nourished and scrofulous, though not always tuberculous.

47. **Rinne and Gelle Tests.**—Brühl discusses the value of these tests; the former, which is well-known, consists in the observation of the phenomenon that the sound of the tuning-fork can be heard, if held in front of the ear, even after it can no longer be heard when placed on the upper incisor teeth. The Gellé test consists in putting the sounding tuning-fork on one of the cranial bones, while the external auditory canal is compressed; if the intensity of the sound becomes diminished, the stapes is movable, but if the sound is unchanged, it is immobile. The conclusions which Brühl draws are: If the Rinné test is positive, then the Gellé is also unexceptionally positive, and the impaired hearing is due to nervous affections. If the Rinné test is absolutely or totally negative or up to C., the Gellé test is unexceptionally negative, and the impaired hearing is due to stapes ankylosis. If the Rinné test is negative below or up to the C, limit, and positive above it, then the Gellé test decides whether or not a stapes ankylosis exists.

51.—See abstract in THE JOURNAL of April 14, p. 935.

52.—Ibid.

53.—Ibid.

54.—Ibid.

55.—Ibid.

56.—Ibid.

59. **Alcoholic Stimulants in Typhoid.**—The use of stimulants in typhoid is indicated by three conditions; toxemia, exhaustion and the accidents of perforation, hemorrhage, etc. In the ataxic form, alcoholic stimulants should not be used, but in the adynamic form, especially in what is called the "typhoid state," they may be of value. They should be used with moderation, as it is better to give too little rather than too much, but the best guide is the renal secretion; if it increases by stimulation, such treatment is necessary. In typhoid septicemia alcohol may be given more liberally, and similarly in exhaustion. Perforation requires the same stimulation needed in surgical shock from other causes, but it should be proceeded with gradually. In hemorrhage, gentle and persistent, not free, stimulation, with opium added to the alcoholic is best. In convalescence stimulants are often useful.

60.—See abstract below, ¶ 81.

61. **Diet in Typhoid.**—Packard reviews the recent literature on the more liberal diet of typhoid fever and notices especially the paper of Bushuyev. He holds that while we may doubt the ability of the patient with the fever to assimilate many of the articles allowed by him, we have facts enough to warrant, if not compel, greater liberality than has formerly been allowed.

62. **Enucleation of Eye.**—De Schweinitz reviews the different methods used and the substitutes for enucleation, that of Ernest Hall, the eviscero-neurotomy of Huizinga, Mules' operation, also Frost's, etc., and in conclusion holds that the operation of enucleation in many instances can not be banished from ophthalmology; and that while some of these methods furnish better cosmetic results when they are successful, there is reason to believe that with improvement in the artificial eyes and the technique in preparation of the stump, an equal im-

provement may be expected, after so-called simple enucleation.

75. **Iritis from Dental Irritation.**—Milliken reports a case of iritis apparently directly connected with decayed teeth, and relieved by their treatment. He thinks there is no question as to the causal relation of the dental disorder to the iritis.

77. **Congenital Color-Blindness.**—Nagel gives an elaborate discussion of certain facts in regard to tests for color-blindness that are based on his own experience, as he is green-blind. He believes that the green test should be retained as the first one, and in a general test of a large number of persons should be considered the decisive one in diagnosing whether or not the color sense is normal, and that the purple test can not be neglected, since it is most convenient for distinguishing red- from green-blind. In tests individually or in a small number, it is best to also use other ones. He notices the various methods that have been advised; those of Daae, Stilling, Pflueger's contrast method and the new pseudo-isochromatic color charts devised by himself, consisting of rings of dots arranged with confusion colors, etc. He also describes an apparatus for testing by means of colored glasses, that is convenient in testing large numbers of persons. He says that it is unjust to consider as color-blind all those who make mistakes with the worsted tests and to refuse them employment in the marine and railway service; and that Holmgren's test is not a reliable one for determining the ability of a person to recognize colored flags or lights. In his opinion tests for this purpose should deal with the color sense of the fovea alone, or the immediately adjacent central portion of the retina. His own test for this purpose is done with a blackened disc, 10 cm. in diameter, with a ring of perforations 1 mm. in diameter, covered with bits of glass of various colors and illuminated by a burner behind. This is viewed from a distance of 1 or 1.5 m., and as the different colors are shown the person is required to name them. In a series of cases in which the tests diagnosed as determined by Holmgren's method did not agree with that of his color apparatus and charts, this method of luminous points always confirmed his diagnosis.

80. **Palpebral Reaction.**—Gifford remarks on the pupilary reaction described by him in 1895 and later discovered by Westphal and Piltz, the latter of whom credits it to Wundt. According to Gifford, this is incorrect and due to a misunderstanding of Wundt's language. However, in regard to the claim of Mingazzini for Galassi as the prior discoverer, he admits that Galassi described it, not only before he did, but before he had even observed it. The point of importance in which Galassi did not anticipate him is that, although it is a reaction from the facial, it does not depend on a reaction of all the fibers of the orbicularis, but chiefly or entirely on the action of those which move the lids or perhaps the upper lid alone.

81. **Intestinal Antisepsis in Typhoid.**—While typhoid fever is no more primarily an intestinal disease than is smallpox a cutaneous one, Anders concedes that in the majority of cases the principal seat of infection is in the intestinal tract, hence the *rationale* of a certain amount of intestinal antisepsis in its treatment. The principal indication for the use of antiseptics is the meteorism due to decomposition in the *prima via*. The normal antiseptic fluids are not present in due proportion and he thinks that the possibility of over-feeding may have something to do with the condition. Assuming milk to be the principal diet, he advises the use of HCl in small doses after each feeding, with a view to supplementing defective gastric secretion, and in robust patients, the use of calomel during the first few days of fever. For a number of years he has been in the habit of giving intestinal antiseptics throughout typhoid, except in the light forms, as they render the dejecta less offensive; and while we can not hope to destroy the infection, as it has generally reached the circulation and adjacent organs, it is probable that the intestinal disorder is in a measure dependent on the disorder of the function which is the indirect effect of typhoid infection; and a rational indication is to neutralize or eliminate the toxic substances from the intestinal canal. The free use of water is one valuable method. In some cases he gives a mild laxative in diarrheal typhoid fever to carry off the decomposing food residue. The bowel antiseptic which he has used for many years is salol, the average dose 3 gr. every three hours; where marked distension of the bowel is present white turpentin is preferred, in doses of 3 to 5 gr. every three or four hours. For the constipation sometimes present, he has found a soap-suds enema every second day the best remedy, and in a few cases has practiced intestinal irrigation, but this is not to be thought of when the principal lesions are in the small intestines with moderate tympanites. Often, however, the ulcerative process is largely confined to the colon, and there is marked tympanites due to distension and active diarrhea sometimes dysenteric, then irrigation judiciously and cautiously carried out sweeps from the bowel decomposing material and toxic products. The solution employed must be warmed and gently introduced at a low pressure. He prefers a solution of salicylic acid not exceeding .5 per cent., or mercuric acid not over 1 in 6000. In bad cases the irrigations should be practiced every four hours, but ordinarily three times a day will do.

82. **Diet in Typhoid.**—Smith thinks that a greater variety of food in small quantities is better than a larger quantity of a single article. The aim should be to give the minimum food that will sustain the patient, not the maximum amount that he will take, and the diet which has stood the test of considerable experience includes—with milk—broths, soft-boiled eggs, junket, custard, the soft part of raw oysters, milk toast, scraped chicken, scraped beef, chicken and rice boiled to a jelly, sago, tapioca, corn-starch, and animal jellies. From these an agreeable variety can be arranged and any article that disagrees eliminated; any rise in temperature should lead to careful scrutiny, including the diet. Without distension it is more likely to be caused by fecal absorption and requires a cathartic, but if repeated and accompanied by sweating, it may indicate infection through ulceration. When milk is used persistently it can be better adapted to some patients by lessening the percentage of casein, which is accomplished by letting the milk stand in a cool place for five or six hours and then pouring off the upper half or two-thirds and filling up the bulk with water. This is useful when specks of undigested curd appear in the movements. If there should be acid or rancid risings from the stomach, showing the presence of too much fat, a portion of the cream should be skimmed off. At any time the monotony of the diet can be relieved by adding coffee, which is a valuable heart stimulant, to the milk.

83. **Treatment of Typhoid.**—Billings insists on the general management including disinfection, a good nurse to look after the diet and carry out the physician's directions, and medication, which is not so essential except in the use of proper drugs to meet the emergencies that may arise. He believes that it is good practice to begin with a cathartic, and that the fever is best treated with water by the Brand method. For constipation, he used enemas every two days but should have no hesitancy in using simple saline laxatives. He considers strychnia good for heart weakness, the bromids for delirium, and ¼ gr. of morphin hypodermically in case of hemorrhage from the bowels repeated every three or four hours if needed, and normal salt solution with chlorid of calcium. He says that ergot is of no use, and that if perforation should occur the patient should be turned over to the surgeon.

91. **Cancer.**—Bra and Mongour have isolated and studied the Nectria ditissima or parasite of true cancer, and have obtained an extract from it which they call nectrianin that appears in the form of a yellowish or brownish liquid and causes by its injection various phenomena in man and in animals. If the animal is healthy, repeated doses—5 c.c. each—several times a week produce no special effects, but if cancerous tumors exist, the temperature is raised in two or three hours from 1 to 3 degrees. If the dose is increased, this fever is accompanied by chills, cardiac palpitation, acceleration of pulse, headache and thirst, and terminates at the end of some hours by polyuria and profound sleep. It seems to have vaccinal properties, as animals thus inoculated and afterward infected with cultures have never produced experimental tumors; the results have simply been abscesses. The therapeutic action of the drug has been studied by Mongour on cancerous patients, through hypodermic injections, which produced decided relief of symptoms, though no decided amelioration of the general health, or increase of weight. In spite of the slight toxicity of

the drug employed—it requires from 30 to 35 grams per kilo of rabbit to kill—they never used more than 4 c.c., injected daily. They conclude that it has the effect of producing improvement and relieving the aggravating symptoms, and that it may therefore be an efficacious treatment. However, to be effective it requires continuance, and has not so far led to anything like a cure or arrest of the disease.

92.—See abstract in The Journal of March 24, p. 750.

93. **Syphilis of the Viscera.**—Hoover reports 6 cases of visceral syphilis, the diagnosis of which was confirmed under antisyphilitic treatment. The first he regards as syphilis of the aorta, the second as that of the pulmonary artery because of the hemoptysis and evidences of disease of the myocardium, and the third apparently pulmonary syphilis, while the others were syphilis of the liver and spleen.

94. **Examination of Male Genitals.**—The neglect of examination of the male genitals is in striking contrast with the course usually adopted with females in obscure disorders, and Valentine suggests its importance. He mentions the rheumatic pains about the hip-joint, connected with trouble in the seminal vesicles, and says that many cases of suicide are probably connected with thihs class of disorders. The urethroscope should be more commonly employed, as it is now within the possibilities of the general practitioner.

97. **Diseases of Korea.**—According to Avison, the Koreans are unwholesome in their methods of life and not especially careful in regard to cleanliness. Sanitation is almost unknown, and the drinking water almost inevitably defiled. The staple crop is rice of the lowland variety, and malaria goes with it and is the cause of many other diseases. Outside of malaria typhoid, and relapsing fevers are the most frequent; tuberculosis plays great havoc, every form having been found, but it certainly does not come from the use of milk. Venereal diseases are prevalent, leprosy has gained a foothold in the southern part, and also a peculiar disease somewhat suggestive of tuberculosis, but in which he has not been able to find the tubercle bacilli. Beri-beri is mostly confined to the Japanese residents; smallpox is common, but vaccination is coming into favor; scarlet fever and diphtheria are not prevalent, but measles and whooping-cough are. Cholera is occasionally epidemic, while dysentery is one of the chief plagues of the country and not unfrequently followed by hepatic abscess. Cataract is common, also much blindness, due to the prevalence of smallpox. The Korean medicine is the Chinese medicine and has its general demerits.

100. **Ischemic Paralysis of Muscles.**—Bernays calls especial attention to the paralysis of the muscles, due to the damage produced by cutting off the circulation by tight bandaging, etc., and quotes from Leser, Volkmann and others in regard to it. He thinks the recognition of the condition will prevent this in the future, and that the recent attention which has been called to this subject by Leser and others is timely and important.

114. **Smallpox in Porto Rico.**—Wadhams reports the methods and results of vaccination in Porto Rico. This has already been done by Groff, but Wadhams gives more details, and states among other facts that, while the tuberculin reaction was obtained in a number of animals used for preparing the virus, not one was found to be tuberculous.

115. **Sprains.**—Huntington believes that in all, except slight sprains, there is some injury to the capsule of the joint that ranges from the giving way of a few fibers, to perhaps a laceration of great extent and hemorrhage into its cavity; and that the swelling so prominent in all serious sprains is probably due to such extravasation, as the muscles rarely escape injury, and the tendons and their sheaths are often also involved. He believes that permanent injury is often due to this rather than to the trouble in the joint itself. Since it is impossible to demonstrate how far patients are injured in sprains, he thinks that the secondary effects may be more serious than is commonly supposed. The old idea that diseases of the spine, hip, etc., start in sprains is perhaps more true than is now thought. Sometimes dislocation and fractures of bones have been mistaken for sprains, and while the fracture of a styloid process or malleolus is only a complication, it should not be overlooked. When in doubt as to the existence of injury, one should give an anesthetic if necessary and thoroughly examine the parts. While Nature usually mends these injuries, in some cases a low vitality and constitutional defects may cause them to produce serious results. The old method of fomenting and applying liniments, is very unsatisfactory. As long as the blood continues to flow into the joint the trouble is increasing, and our first object should be to check hemorrhage of the torn vessels; this is best done by applying a firm even pressure by strapping with strips of adhesive plaster that immediately brings most gratifying results. If the conformation of the sprained joint forbids the use of plaster strips, bandages of muslin, not rubber, may be used, carefully padding all hollows so that the pressure is exerted on the soft parts and not on the bony prominences. He believes in hot water applications as a precedent to this dressing, that splints are rarely required, and that passive motion should be begun early and applied only in the natural directions, as there is then no danger of stretching, or displacing the parts. Electricity, massage and stimulating liniments may be used later if necessary, after the active symptoms have subsided. If motion seems permanently impaired from adhesions, the best plan is to give an anesthetic and break them down, so as to have a fresh sprain, and by care avoid the development of further trouble.

117.—See abstract in The Journal of May 12, ¶ 11, p. 1184.

124.—This paper is editorially considered in this week's Journal.

## FOREIGN.

### British Medical Journal, May 12.

**Plague in the Lower Animals.** Frank G. Clemow.—A large number of animals, including not only the vertebrates but some of the lower forms, have been proved liable to infection by plague. Among the mammals, monkeys have been observed on at least three separate occasions to have sickened and died under natural conditions, and each time the germ has been discovered bacteriologically. Under artificial conditions, they have shown themselves very susceptible, but there is not much proof that they aid in spreading the disease to any considerable extent. The chief agents in this direction are the rodents, especially the rats, which suffer in every epidemic. Their symptoms vary as in man, and occur under their natural conditions of life or can be produced artificially. They may become infected from the soil, which under certain circumstances may contain the virus of plague, and there is a possibility of their obtaining the germ from infected grain, while it is also probable that they may contract the disease from other animals, though there is no positive proof of this. Rats are so ubiquitous and omnivorous that the chances of their infection are manifold. There is good reason to believe that plague can be spread from rat to rat by means of insects, especially fleas, and it must be admitted that they can and do suffer from plague under natural conditions, and that they are capable of diffusing infection and transmitting it to man; but the extent to which they are responsible for the general diffusion of the disease is uncertain. Their habits of traveling in public conveyances, ships, etc., make it a matter of special importance to guard against them. There is not much evidence that mice suffer to any great extent under natural conditions. Squirrels have been known to have it, though instances of their contracting the disease are rare, and the part they take in its spread must be very small. Other animals that are liable to suffer are the marmots. These are thought to have spread the disease in East Mongolia. Guinea-pigs and rabbits are susceptible in the laboratory, but are not known to have contracted the disease under natural conditions.

**Researches Into Nature and Action of Snake Venom.** Robert H. Elliot.—The writer has experimented with snake venom, which does not seem to be effective when taken by the mouth, but is found to be very quickly absorbed when introduced directly into the tissues. He drew out a portion of the small gut through an abdominal incision, establishing an artificial anus, and after the parts had healed, the cobra venom, dissolved in milk, was injected into the lower disconnected portion of the gut, the hepatic, pancreatic and biliary secretions being cut off from this section. The animal died.

and the result shows that the venom could be absorbed through the intestines, though not so rapidly as by way of the subcutaneous tissue. Professor Fraser has shown that the bile is to some extent a protective against the venom, but Elliot's experiments show that this is not alone thus active; he followed up Fraser's suggestion that pancreatic juice may also neutralize it and found that trypsin is capable of reducing very materially the lethal properties of cobra venom, when kept at a temperature of 100 F. The above-shown properties of trypsin explain why the venom fails to kill when swallowed, even after the protective influence of bile has been excluded, though it would certainly kill if given in large enough quantities when the bile and pancreatic secretions are excluded from the area of the intestines which has to deal with the venom. The above experiments were made on rabbits, but he found that he could not produce symptoms of poisoning by injecting a large dose in the rectum of a dog. He also found that in rabbits injection into the peritoneum killed much more rapidly than that into the subcutaneous tissue, and that feeding animals on venom produced a certain immunity to it when injected subcutaneously and he surmises that when taken by the mouth it passed in some form, probably an altered one, into the general circulation. It is, he thinks, more than likely that the mongoose owes its immunity to the habit of eating the heads of serpents that it kills.

The Lancet, May 12.

**Ptosis of Liver and "Floating Lobe."** Frederick Treves.—The author defines floating liver and points out the distinction between general ptosis and the "floating lobe," in which a portion of the right liver becomes projected downward in the form of a large tongue-like appendage. He describes the anatomy of suspension of the liver, the manner of its downfall, and the deformity which follows. The liver becomes more flattened out, the anterior or inferior border of the right side seems to be drawn downward and, with the gland adjacent to it, much thinned. In many cases a nearly transverse groove is found across the anterior surface of the elongated part of the right lobe. It may sometimes be a real constriction almost causing amputation. As to the cause, there is little that is precise in our knowledge. The symptoms are the physical signs of tumor, various nervous disturbances, dyspepsia, discomfort in the abdomen, dragging from the back, sometimes vertigo and perhaps jaundice, as claimed by Faure. He gives the method of examination in detail. The "floating lobe" is not always easily diagnosed; in most cases this is only assured in the post-mortem, and it is sometimes mistaken for movable kidney. The medical management of liver ptosis consists merely in the treatment of symptoms. Belts may be of value. The operative treatment consists in various methods of suturing. Treves does not favor either amputation or suturing of the "floating lobe." The indication for its treatment does not go beyond that of the treatment of distended gall-bladder, with which this deformity is often associated. In complete ptosis much may be done by carefully applied and substantial support, and something more elaborate than a belt may be necessary. A ponderous organ like the liver can not be sufficiently supported by a few isolated sutures of silk or catgut, and operation is needed only in extreme cases.

**Diagnosis and Prognosis in One Hundred Cases of Double Optic Neuritis with Headache.** R. T. Williamson and Edward Roberts.—The authors call attention to the class of cases in which double optic neuritis occurs, sometimes with vomiting and other symptoms, but which afterward clear up without any apparent cause. Sometimes the general symptoms disappear and leave blindness. He suggests the probability of a tumor becoming latent, or sometimes distention of the ventricles of the brain as a cause for this condition. In cases of double optic neuritis we should watch the urine and cardiovascular system for nephritis, look out for lead poisoning, chlorosis, etc., and the ear should be examined for otitis. If all these can be excluded, the probable diagnosis of brain tumor is justifiable, but it may sometimes, as in cases mentioned, not be supported by the outcome.

The Practitioner (London). May.

**Distinguishing Features of Rheumatoid Arthritis, Gout and Rheumatism.** Arthur P. Luff.—The differential diagnosis of arthritis and rheumatism is discussed by Luff. He thinks that many cases of chronic rheumatism of the joints are not such, but are rheumatoid arthritis or gout. Rheumatism itself does not necessarily manifest itself as a joint disorder and he thinks the treatment with salicylate of soda is a good diagnostic point. If it has succeeded, the case is rheumatism, if not, one of the other forms should be suspected. The distinction between rheumatism and gout is somewhat difficult, but the following are the distinguishing characteristics. Rheumatoid arthritis is most commonly found in females, gout in males. The former occurs mostly among the poor and ill-nourished, and especially under conditions of depressed health, prolonged anxiety and exposure. Gout occurs among the well nourished and well-to-do. Arthritis is improved by good diet, the reverse is the case with gout. Gout usually begins in the feet, the other generally in one of the joints, usually the thumb. In arthritis there is no obvious swelling at first and no marked redness and little pain. The insidious nature of the attack is one of its worst features. Gout begins suddenly, with serious pain, redness and swelling. There is a lack of symmetry. Gout no doubt is due to the accumulation of uric acid, but as regards arthritis there is a great difference of opinion. The author combats the nervous theory and believes that it is an infectious disease. He quotes the findings of Bannatyne, Wohlmann, Schneider and others in support of this view. It is not common to have gout and rheumatoid arthritis associated. Rheumatism certainly predisposes to rheumatoid arthritis.

**Some Clinical Varieties of Osteo-Arthritis.** Archibald E. Garrod.—Multiple rheumatoid arthritis falls into three main clinical categories. In young patients the disease often tends to advance with great rapidity so that in a few months it may cause widespread deformity. In older patients its progress is more gradual, and, though many articulations may be implicated, the appearance of the joint differs from that of the young and the destruction is somewhat different. There are usually definite bony enlargements; the carpometacarpal joints of the thumb are especially liable to be affected, and not unfrequently are the first of the hard joints to suffer. The more acute cases which occur in younger patients may be divided into two forms—the fusiform and the crippling. In the former, the fusiform enlargement appears to be chiefly due to swelling of the capsules with synovial effusion. The terminal joints of the finger usually escape and the brunt of the disease is borne by the metacarpophalangeal and first row of interphalangeal joints. The vertebral column is usually early involved, stiffness of the neck is common, as also is stiffness of the temporomaxillary joints, though it is seldom serious, but it is often of diagnostic importance. In the larger joints there is a similar swelling, and the knees, wrists, and ankles are rapidly involved, muscular wasting adds to the deformity. The third form or crippling variety is usually met with in early adult life, muscular wasting is rapid and conspicuous swelling of the joints is not so marked but sharp osteophytic growths are usually felt on the ends of the bones. Some joints become permanently flexed, while all are rendered almost completely immobile. How far these clinical varieties indicate pathologic distinctions is hard to answer, and there is much to be learned in regard to them. As regards treatment, the nodular cases and crippling variety show little tendency to be helped. In the fusiform variety some good can be done if treatment is steadily persisted in. The drugs given should be tonic rather than depressant in their action, and the diet should be limited only by the patient's digestive powers. Mineral baths are mentioned as occasionally of value.

**Varied Forms of Rheumatoid Arthritis, with Illustrative Cases.** Wm. Armstrong.—The points worthy of consideration, according to Armstrong, are given as follows: "1. The more clearly these cases approach the gouty or rheumatic type the more favorable is the prognosis. 2. The more the neural factor comes into evidence, the more refractory they are to treatment. 3. It is necessary to look for every possible source of reflex irritation. 4. Whatever reflex irritation is present, the condition of the central spinal nervous system should not be lost sight of. 5. However strong the patient may appear to be, supporting rather than lowering treatment should be adopted. 6. In arthritis the dietary should consist of more butcher's meat, less starch, and no sugar; this is especially necessary where gastric atony or duodenal fermentation are present or where the excretion of uric acid is decidedly below the normal. 7. This form of dietary requires careful watching, and exact application to the individual. 8. Electric baths are valuable in the majority of cases; the 'sinusoidal' if much neuritis be present, if it is necessary to quicken metabolism, or to stimulate excretion; the 'constant,' if a soothing effect upon the joints is required. 9. There is the greatest difference between electricity given in the baths and in the dry; in the former case the patient is wrapped in what is practically an electrode of water and the whole nervous system is quickly brought under influence."

**Osteo-Arthritis, or Rheumatoid Arthritis, Its Pathology and Treatment.** Gilbert A. Bannatyne.—The condition distinguished under the head of arthritis deformans, etc., presents itself in three well-marked types: 1, an acute polyarticular disease; 2, a chronic articular one of primary and secondary forms; and 3, a monarticular disease. The first of these occurs in the young, accompanied with fever which finally subsides and there is a thickening of the synovial membrane and muscular atrophy. The bones may be softened, but with no outgrowths or lipping. In the chronic form we have the hardening and thickening of the joints with cartilaginous outgrowths and deposits. In the third group, which generally occurs in men as a result of injury, there is an affection of one or two joints, with bony absorption and destruction of the cartilages, limited motion, and generally slow progressive local degeneration. The theories are discussed and the author favors that of toxic infection from bacilli for the first form. The bacterial theory is the only one which he thinks will rationally explain it. The second he is inclined to look on as of bacterial origin with loss of virulence as compared with the acute form. In the third form he would say there is a pure degeneration of the joint structure. As regards treatment we can do little directly to neutralize toxins, but proper attention to diet, clothing, exercise, baths, massage, etc., will be of value. As for drugs, guaiacol, salicylates, etc., are of value. Methyl salicylate and guaiacol painted on the joints seem to give good results.

### Bulletin de la Soc. Med. (Paris), May 3.

**Effect of Persisting Nasopharyngeal Lesions After La Grippe.** M. Faure.—The lesions so common in the nasopharynx after la grippe may induce rheumatic manifestations persisting for months, but vanishing at once as soon as the lesion is cured. Faure has treated twenty patients with this syndrome, relieving the general symptoms with antistreptococcic serum, which seems to rapidly suppress the virulence of the streptococcus toxins and hence the general symptoms, but has little effect on the local process. This he treats with resorcin in oil and inhalations of mentholized alcohol. These small, ignored infections in the nasal fossæ or their annexes may be the cause of many rheumatic, neurasthenic or neuropathic accidents to which some other etiology has been ascribed.

### Presse Medicale (Paris), May 2, 5 and 9.

**Incipient Coxalgia.** P. Desfosses.—Whenever a child complains of pain in the hip or knee, or limps intermittently, evidences of coxalgia should be sought. If less than 1 year old, when lifted by the axillæ the legs of a normal child will kick around, but if one of the joints is affected that limb will hang straight and still or in slight flexion. When undressed and lying flat on his back, the limbs of a normal child are extended straight, but a limb with incipient coxalgia is always flexed, the knee raised, and if the limb is pressed down straight, the trunk will curve upward in pronounced lordosis, allowing the passage of the hand between the lumbar region and the bed. If the sound leg is flexed on the pelvis, a normal child allows the other limb to remain extended straight, but the coxalgic invariably flexes the affected limb, elevating the knee. Palpation will also show atrophy of the muscles. Pains can also be induced by pressure on the base of the triangle of Scarpa, and also in this same spot by pressure at a distance, tapping on the trochanter, the heel or the front of the knee. Attempt at abduction of the thigh is also painful. For treatment, Desfosses recommends a large plaster cast, immobilizing the extremity in a good position, but allowing the child to be up and about on crutches, the foot raised above the ground by a high extension shoe on the sound foot. He puts on a tricot vest, the legs in the sleeves, and for a child of 7, winds eight plastered bands 5 meters in length and 6 cm. wide, from ankle to axillæ, around the entire affected extremity and the trunk. Pure air, sunshine and good food, "including cod-liver oil," will complete the cure and promptly arrest an incipient lesion.

**The Permanent Urethral Sound.** F. Guyon.—The permanent sound is a therapeutic measure of the utmost importance. In febrile urinary infection and in prostatic or urethral hemorrhages it promptly and positively arrests the accidents. The reappearance of temperature indicates infectious localizations elsewhere and is thus an important guide to the surgeon. Guyon adds that the benefit derived is permanent, even after the sound is discarded except for occasional use.

**Mitral Dwarfs.** A. Gilbert and F. Rathery.—A special clinical type is described, characterized by pronounced mitral stenosis without functional symptoms, and multiple dystrophic disturbances. They propose for it the name of "mitral nanism," as the small size of the subjects is the most striking characteristic. In three typical observations the height varied from 4 ft. 5, to 4 ft. 11 inches, in great contrast to the size of the parents. This dwarfishness is accompanied by a specific facies: round-shouldered, wrinkled, the subjects appear much older than their age, or fresh, vivacious, perennially young. They are loquacious, speaking rapidly and stammering, with subnormal intelligence and queer, original, inconsequent ideas. All are easily frightened and great cowards; some apathetic and lazy. In certain cases cardiac epilepsy has been noted, also hysteria or chlorosis. The writers emphasize this mitral hysteria and mitral chlorosis. Albuminuria is occasionally observed and gastric disturbances are frequent, but there is little disturbance in the genital sphere. Various malformations are noted: the lobe of the ear is "glued down;" the axis of the nose one-sided; the sternum may be deformed; one shoulder less developed than the other; supplementary fingers, congenital amputations, prognathism and general hypoplasia. The mitral lesion remains latent and does not make trouble even with pregnancy and repeated attacks of acute articular rheumatism. This absolute lack of cardiac disturbances in these small-sized persons with an unmistakable mitral stenosis is interesting to compare with the serious and tenacious cardiac accidents that sometimes occur in large-framed persons with commencing senile involution without the slightest trace of a valvular affection to be discovered. The writers are making a special study of this condition for a future report. The freedom from cardiac accidents is most complete in cases of pure mitral stenosis and complete "nanism." If the latter is less pronounced, and insufficiency complicates the stenosis, then functional symptoms become apparent. Hemiplegia may be the first manifestation of the lesion, with or without aphasia, both usually incomplete and transient, but liable to recur.

### Semaine Medicale (Paris), May 5 and 9.

**Arteriovenous Aneurysm of Aorta.** Rendu.—An engraver 47 years old, quietly at work, in his usual good health, was suddenly seized with intense pain in the precordial region and an almost immediate development of an extensive edema of the neck and face, of a bluish tint, with threatening asphyxia. This condition improved but slightly during the week; collateral circulation then became established and varices appeared. The symptoms indicated an aneurysm complicated by obliteration of the vena cava by a thrombus or escape of the arterial blood into the latter vein through some fissure. The autopsy confirmed the latter supposition: a perforation the size of a bean was found at the base of the large aneurysmal sac, communicating with the inferior vena cava by its anterior wall. There were no clots in the vein nor in the venous trunks debouching in it.

**Action of Iodoform on Normal Tissues.** V. Cornil and Coudray.—Injection of iodoformed oil in the peritoneum of dogs and rabbits induced inflammation similar to that produced by traumatism or any aseptic irritating agent. There was first a tendency to necrosis, followed by invasion of leucocytes, and a phase of nutritional superactivity and formation of endothelial and plasma cells. Its therapeutic effect is evidently due to the liberation of nascent iodin by the action of fats or of the microbes or their toxins. In spite of the deluge of new antiseptics, iodin still holds the first rank, Mikulicz recommends painting the field of operation with tincture of iodin before an operation and sterilizing the finger nails by dipping them also in the tincture. Rydygier advises wiping the hands with iodoformed gauze dipped in sublimate solution, as the final step in their asepsis. K. Brunner, in his large work on the treatment of wounds, published in 1898, stated that a saturated solution of iodin in 50 per cent. alcohol is the best disinfectant known. Coudray treats deep fistulæ very successfully by introducing iodoform in suspension in ethyl chlorid, which boils at 10 C. Slightly heating the "ipsileur" containing the mixture, it emerges in the form of a gas, carrying the iodoform with it and depositing the latter in an even layer throughout the entire cavity—a most effective method of local application in all wounds and cavities.

### Deutsche Medicinische Wochenschrift (Leipsic), May 10.

**Diagnosis of Gastric Hyperacidity.** L. Schueler.—The condition known as "masked hyperacidity" is not so difficult to diagnose as generally supposed, if with a characteristic clinical picture the stomach-contents possess a certain number of properties which we are accustomed to attribute to a hyperacid gastric juice, even in the absence of considerable amounts of free hydrochloric acid and total acidity. The three chief elements in the diagnosis are the specific behavior of starch digestion, the comparatively large amount of the contents and the low specific gravity, after an Ewald test-meal. The digestion of starch continues in the stomach by the action of the saliva ferment for a certain length of time—the "stadium amylolyticum"—in normal conditions, but with abnormally rapid and large secretion of acid, this stage is materially shortened, and amidulin will be found to excess in the stomach-contents, with a corresponding absence of dextrorotatory substances. The quantity of the contents varies normally from 75 to 305 c.c., average 180, but the average in forty hyperacid patients examined at Senator's clinic was 210 c.c. A specific gravity below 1010 scarcely ever occurs except with hyperacidity, hypersecretion or gas fermentation. Above 1020 suggests hypoacidity. The freezing-point varies from .33 to .58 in normal conditions, but with hyperacidity .27 and .25 have been noted. Seventeen observations are tabulated, all with normal amounts of total acidity, and yet with unmistakable clinical evidences of hyperacidity. We quote the findings in one case an hour after the test-meal: amount of stomach-contents, 315 c.c.; specific gravity of filtered contents, 1010; total acidity, 36; free hydrochloric acid, 22 degrees; Trommer's test positive; polarization; 1 per cent. dextrorotatory substances; blue-violet reaction to iodin; lowering of freezing-point .27.

**Acute Dilatation of Heart and Cor Mobile.** A. Hoffmann.—The liability to error in diagnosing dilatation of the heart, from an abnormally high diaphragm and more especially from a movable heart, is emphasized in this article.

**Epileptic Seizures and Uric Acid.** Caro.—A young man in good health, except for occasional epileptic seizures, was examined to determine the connection between the seizures and the elimination of uric acid. The curves show that the amount of uric acid in the urine fell progressively from .104 per cent. to .059 in seven days, and then abruptly rose again. Two severe seizures occurred the day it reached its lowest point. The amount of urine varied in an almost parallel curve during the sixteen days of the test.

### Muenchener Medicinische Wochenschrift, April 24, May 1 and 8.

**Hystereurysis.** Deckart.—Kuestner makes frequent use of the colpeurynter in cases requiring artificial delivery, but he inserts the bag in the uterus and therefore insists on calling it hystereurynter. This communication from his clinic tabulates the detail of forty-two cases in which he has applied it during the last six years. He especially recommends it for placenta previa. In his nineteen cases twelve of the seventeen living children were born alive, losing only 30 per cent., while the latest published statistics with Braxton-Hicks version show a mortality of 52 to 56 per cent. The results were most gratifying in every case as far as the mother was concerned, except one patient in extreme anemia, who died in half an hour after commencement of delivery. The membranes must be penetrated to allow the bag to enter and press the projecting flap of the placenta against the wall of the uterus. If the entire placenta projects, it has to be bored through with the finger or a blunt instrument to admit the bag. This entails the possibility of injury to the fetus, but this remote contingency should not be allowed to counterbalance the manifest advantages of the procedure, which is an invaluable means of inducing vigorous contractions of the uterus at any time during delivery. The physiologic mechanism of the birth-act is imitated as far as possible. The amount of boiled water introduced should correspond to the size of the head of the fetus; about 600 c.c. representing a circumference of 32 cm. Withdrawing a portion of the fluid sometimes accomplishes better results than the full amount. The average interval before the expulsion of the bag was 3½ hours. The hystereurynter should be kept clean and ready for use in a 1/1000 solution of sublimate, which does not seem to injure the bag, although the danger of bursting must be borne in mind. It has occurred in the writer's experience three times.

**Ethyl Chlorid Narcosis.** G. Lotheissen.—"Visitors to our Innsbruck clinic have all been amazed at the rapid onset of anesthesia, the faultless course of the narcosis and the early complete awakening, with our method of ethyl chlorid narcosis." There has been one death known in the 2550 narcoses on record with it (Kocher), but in the extensive experience of the writer no inconveniences nor dangers have ever been observed, even with protracted narcosis in cases of lung and heart troubles. The subcutaneous injection of heroinum muriaticum is sometimes combined with the kelene narcosis in case of alcoholics. He uses the Breuer mask and restricts the amount to 1 to 2 gm. a minute, administering it very gradually from a small-mouthed vial, and if the patient becomes restless, waiting until no ethyl chlorid can be smelled at the expiration valve. If agitation continues he removes the mask at once and rubs the face with a cold wet cloth.

**Fatty Necrosis with Affections of the Pancreas.** M. B. Schmidt.—The autopsy of a man dying fifty-eight hours after having had the trunk crushed between two cars presented unmistakable evidence that the juice had been forced out of the pancreas and induced fatty necrosis of the adjacent tissues, an experience as convincing as a laboratory experiment, in explaining the etiology of fatty necrosis with affections of the pancreas.

**Treatment of Anthrax.** A. Strubell.—The writer confirms the great benefits derived in gangrenous anthrax from local injections of a 3 per cent. solution of carbolic acid, increasing from 12 to 24 c.c. a day, combined with hot cataplasms, 63 C., renewed every ten minutes night and day. The virulent germs found in the gangrenous focus at first were all destroyed by this treatment in six hours, and no further cultures could be derived. No carboluria was noted, nor other inconvenience.

**Improved Inhaler.** K. Klein.—The advantage of inhaling filtered, warmed, and possibly medicated air is obtained with the little respirator devised by the writer, which is also adapted for the use of persons who breathe through the mouth at night, and for workmen in industrial establishments. It is made entirely of aluminum wire and netting, and is thus extremely light and flexible, fitting like a cup over the mouth and nose, and fastened, like spectacles, by wires over the ears.

**Asses' Milk for Infants.** H. V. Ranke.—Asses' milk is a suitable, easily digested and most nourishing food for infants during the first few months, says v. Ranke, from his own experience and that of many other well-known practitioners. The relative proportions of the ingredients is a most important factor in infant feeding, and in this respect asses' very closely resembles human milk.

### Wiener Klinische Wochenschrift, April 15, 22, 29 and May 6.

**Different Positions of Jaw as Aid to Surgeon.** M. Wassermann.—The accessibility of the retromaxillary fossa is very much increased when the lower jaw is wide open and consequently the surgeon will find it a great assistance, in all operations in this region, to have the lower jaw held down as low as possible, thus pivoting forward the upper end. The writer usually incises down to the bone first, and then has the jaw opened to the farthest point and held by an assistant, to complete the operation with increased facility of access. The lower jaw can also be pushed considerably to one side, the mouth closed, and this will be found an aid to Salzer's resection of the trigeminus. By pushing it laterally and forward, Sonnenburg's resection of the alveolar nerves can be more easily accomplished.

**Blood-Pressure with Digitalis.** E. v. Czyhlarz.—Tests of the action of digitalis, with Gærtner's tonometer, showed that the usual amount of inf. fol. digitalis administered to patients with heart troubles failed to increase the blood-pressure in persons with normal circulation. After establishing this fact, Czyhlarz further demonstrated that in normal individuals the amount of urine did not vary, while in cases of uncompensated heart troubles it is much increased. Czyhlarz ascribes this lack of diuretics to the corresponding lack of increase in the blood-pressure.

**Movements of Intrathoracic Tumors in Swallowing.** G. Holzknecht.—Upward movement of an aneurysm as the patient swallows, indicates firm adhesion to the trachea and consequent danger of perforation into the latter and death from hemoptysis. The tumor in the case reported was ascribed to the innominate artery.

**Diagnosis of Ischias.** E. Sucharipa.—There seems to be a certain interrelation between the sciatic and lower abdominal regions, as sufficiently strong stimulus applied to the great sciatic is transmitted, probably by way of the spinal cord, to the cutaneous nerves of the lower abdomen and thigh. This interrelated system can probably be excited in other ways as, for instance, by the influence of irritation of the corresponding segment of the spinal cord proceeding from some internal organ or region of the body, aside from the above-mentioned route. Compression of the sciatic would induce violent radiating pains in the thigh, if this assumption is correct, even with a sound sciatic. In case of affection of some internal organ, connected like the sciatic, with the same segment of the spinal cord, abnormal excitability of the organ on account of its lesion might co-operate so that even slight compression of the sciatic from the periphery might produce a response in the nature of a violent paroxysm of pain in the thigh. It is sometimes very difficult to decide between intercostal neuralgia and lumbago. But if, on rectal examination, the lumbosacral plexus is found especially sensitive with radiating pains into the thigh, we have reason to assume from the data cited above that it is a case of intercostal neuralgia and not of lumbago.

**Dysmenorrhea Membranacea.** Kollmann.—It seems evident, from the research described, that dysmenorrhea membranacea has no connection with pregnancy and abortion and does not occasion sterility, while it may heal spontaneously. Besides establishing these facts, Kollmann announces that the dysmenorrheic membranes have nothing to do with inflammation of the uterine mucous membrane; that the fibrin membranes should be considered true dysmenorrheic membranes; that they are easily confounded with blood clots or the products of a croupous inflammation, but that in reality they are the product of a necrosis induced by hemorrhage and exudation into the tissues.

### Gazzetta degli Ospedale (Milan), April 15, 20, 22 and May 7.

**Prophylaxis of Malaria with Insect Repellers.** C. Fermi. A series of four hundred tests with various insect-repelling substances sprinkled on the clothes or smeared on the skin, resulted in the discouraging conclusion that no substance is yet known which will positively repel gnats and mosquitoes for one to two hours. The immunity enjoyed by certain persons, however, encourages the hope that some substance will yet be found which will answer the purpose, and Fermi is continuing the research on which he has been engaged since 1898.

**Urogenital Tuberculosis.** C. Posner.—At the request of the organizers of the Antituberculosis Congress, Posner reviewed the present status of our knowledge in regard to the route of infection of urogenital tuberculosis. His study is based on 2300 autopsies in Virchow's institute. He noted tuberculosis in 380 and renal tuberculosis in 115, i. e., in 5 per cent. of all the subjects and in more than 30 per cent. of the tuberculous. The kidney was affected in 89 out of 331 cases of pulmonary tuberculosis. In the 380 tuberculous subjects, 5 were less than 4 years old. The bladder had been invaded 12 times in the 115 cases in which renal tuberculosis was noted; the genital organs 8 times in men, and 9 in women. In the latter there was always concomitant tuberculous peritonitis. In the rare cases in which we are unable to discern a primary focus elsewhere during life, it may exist, notwithstanding, and the urogenital infection occur though the blood or lymphatic system as usual. This view is confirmed by the manifest connection between tuberculous orchitis and some preceding local irritation, traumatic or gonorrheal. There is a possibility that tuberculous infection may be propagated through sexual relations, as traces of tubercle bacilli have been found in the sperma of tuberculous patients with sound genital organs. When there are symptoms of genital tuberculosis, abstention from sexual relations is necessary as a matter of course. The bacillus may possibly penetrate into the blood without leaving traces of its passage. [Posner was offered the chair of urinary affections, newly created at Rome, but declined. Ed.]

**Tuberculosis Antitoxins in Serum.** Roncagliolo.—Numerous tests on persons in health or with various diseases showed that the human serum in health possesses means of defense against the toxins of tuberculosis, averaging 1000 to 4000 antitoxin units. This antitoxic power attains its highest intensity in persons addicted to the use of alcohol, reaching 10,000 units in one subject, a man of 52, with chronic alcoholism and hemorrhagic pachymeningitis. This fact seems to substantiate the popular belief in the efficacy of alcohol in the cure of tuberculosis and infectious diseases in general. Serum of dogs, rabbits, guinea-pigs, fowls, etc., has no antitoxic power, but that of cows, goats, etc., possesses it in a varying degree. Further research established that this antitoxic power in man diminishes with defective nourishment and debility; also that injection of even a large amount of Maragliano's antitoxin at one time did not alter the amount of antitoxin in the blood to an appreciable degree. But repeated injections of a small amount—1 to 2 c.c.—raised the antitoxic power in a month or two to 10,000 antitoxin units per cubic centimeter, far more than the number of units actually introduced into the organism by the serotherapy.

**Action of Tuberculosis Toxins on Lung Tissue.** F. Badano.—Endopulmonary injections of soluble toxins without bacilli, produced in the dog a catarrhal bronchopulmonary process tending to spontaneous and complete recovery. In the rabbit, on the other hand, similar injections entailed cellular infiltration and formation of nodules with all the characteristics of young tubercles except giant cells. The process progressed to necrosis and complete caseous transformation of the zone of lung tissue involved.

**Enzymes in Animal Kingdom.** Fermi.—A proteolytic enzyme was found constantly by Fermi in the intestines of mammals, reptiles and fishes, also in the larvæ of insects, but full-grown insects, which feed by sucking, and parasitic worms, which probably obtain their nourishment by endosmosis of predigested substances, did not contain any proteolytic enzyme.

**Early Diagnosis of Tuberculosis.** Petruschky.—In inoculating animals to differentiate a dubious case of tuberculosis, mixed infection can usually be prevented by treating the material with a 1 per cent. solution of phenic acid, which kills the diplococcus lanceolatus, etc., but has no effect on the tubercle bacillus. To send material by mail, Petruschky recommends a metal box lined with filter-paper moistened with the same solution. The box is wrapped in parchment paper and enclosed in a wooden box, when it can be sent safely to bacteriologic headquarters for examination. He dwells on the fact that Cornet, Brieger, Neufeld and B. Fraenkel are all advocates of the harmlessness and efficacy of the tuberculin test, but all agree that it should never be made while there is fever. Petruschky recommends it not only for the test but also for treatment, proclaiming that the early differentiation possible with this test, and immediate treatment with the tuberculin, is the most perfect and least expensive means at our command in the struggle against tuberculosis.

**Cure of Malarial Hypertrophied Spleen.** A. Mori.—Parona has reported four cases in which the spleen was restored to normal size in three and very much reduced in the fourth by the systematic hypodermic injection of a gram of a solution of iodin and potassium iodid in glycerin, with a small amount of guaiacol added. Mariano has reported three cases thus cured, and Mori now announces that he has obtained most excellent results with these injections in sixteen cases, combined with general antimalaria treatment. Twenty injections were sufficient to reduce the spleen to nearly normal size in acute cases, and sixty in the chronic.

**Prophylaxis of Tuberculosis on Railroads.** G. Sanarelli. "The railroads must take measures to guarantee the public against the dangers of infectious diseases and especially against contagion from tuberculosis in the cars. Compulsory disinfection of the cars set apart for the conveyance of contagious diseases should therefore be imposed. Notices forbidding expectoration on the floor should be posted not only in depots but also in all the passenger cars. The waiting-rooms and the majority of the compartments in the passenger and sleeping cars should be provided with cuspidors partly filled with antiseptic fluid, and smoking allowed. In other compartments, without cuspidors, spitting and smoking should be alike prohibited under penalty. The railroad companies should be invited to adopt an efficient system of ventilation. The floor coverings should be linoleum or rubber, or, if of wood, should be smooth and impermeable. The materials used for draperies and upholstering should be impermeable and capable of being sponged off. Cars should be so arranged that they can be thoroughly cleaned every day." [The Italian railroads are now testing a couple of cars constructed to conform in every particular to these requirements. Ed.]

**Predisposition to Tuberculosis.** De Giovanni.—Twenty-five years have passed since De Giovanni began his study of this subject and he has elaborated a formula permitting the early recognition of the candidates for tuberculosis as he calls them. This recognition is one of the most valuable prophylactic measures at the command of the physician, and wise counsel and appropriate measures at the different stages of development may transform a candidate otherwise inevitably doomed, into a robust and useful member of society. The organism should be examined from two separate points of view: 1, the evolution of the human race from lower types, seeking the points in the physique, where there is defective organization, which thus constitute a special morbific tendency; 2, the morphology of the physical structure, the morphologic correlation between the different organs, seeking the defective development of certain organs and especially of the circulatory system, which has a tendency to exaggerate the primary anomaly. Unequal development of the circulatory system is the principal element in this predisposition. The heart is smaller than normal in the majority of candidates, and there is always disproportion between the development of the ventricles; the left one is invariably smaller than normal, both relatively and absolutely, and the right, larger. The individual morphologic variety depends on the various proportions of other anatomic and physiologic moments, such as the comparative thickness of the walls, size of the cavities and the energy of the nervous system. In consequence of this abnormal development, the left heart inadequately fulfills its function, with consequent greater hydraulic pressure in the vessels entering it, also in the lungs and finally in the right heart, which proportionately increases in size. The importance of these hydraulic facts to the lungs becomes evident as we study their mechanism from the start, when the functional relations of extrauterine life are being established, and trace their influence on the respiratory function and the lymphatic circulation during growth. The arteries are always small in persons predisposed to pulmonary phthisis, and their defective development is intimately connected with the defective development of the heart and thorax. The veins are more numerous and larger or more conspicuous by their bluish color, especially in the regions over the visceral cavities in which the morbific predisposition is located, usually the thorax. He also includes the predominance of the lymphatic system as an element in the predisposition, as is generally recognized.

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# Original Articles.

## THE PRESIDENT'S ADDRESS.

DELIVERED AT THE FIFTY-FIRST ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT ATLANTIC CITY, N. J. JUNE 5-8, 1900.

BY W. W. KEEN, M.D., LL.D.
PHILADELPHIA.

Two duties seem to me to devolve on the President of the AMERICAN MEDICAL ASSOCIATION in his annual address: 1, to consider the condition of the ASSOCIATION, with any suggestions that may be made for improvement, and 2, to take up some subject of professional interest which may be properly considered before the chief representative medical body of the United States.

In pursuance of the former, it is a great pleasure to me to congratulate the ASSOCIATION on its marked prosperity. The AMERICAN MEDICAL ASSOCIATION now numbers about 9000 members. A large number, truly, but when we consider that there are over 100,000 regular physicians in the United States, it is strange and anomalous that this ASSOCIATION should comprise less than one in ten of these physicians. I call your attention to this important matter in order that every member of the ASSOCIATION during the coming year shall *try at least to induce another fellow physician to join* the ASSOCIATION and thus double its influence for good.

### THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

One of the most important functions of the ASSOCIATION is the publication of THE JOURNAL. Here, again, I have only words of encouragement. The number of subscribers to THE JOURNAL is about 15,000—a number, undoubtedly, in excess of that of any other medical journal in the United States, and I suspect only surpassed by the *British Medical Journal,* which publishes over 21,000 copies weekly. But it is not only on the number of subscribers that the ASSOCIATION is to be congratulated, but especially on the quality of the papers published in THE JOURNAL. It is, however, not only idle words of vague praise that we should bestow on the trustees and the able editor of THE JOURNAL, but we should recognize that never before in the history of THE JOURNAL has it been so well conducted, its pages so filled with admirable original articles and its influence for everything that makes for the best in medicine so potent as at present.

### THE RUSH MONUMENT FUND.

Dr. Albert C. Gihon resigned at the last meeting as the Chairman of the Rush Monument Committee. It seemed to me that his successor should be a physician rather than a surgeon, and from Dr. Rush's native city. Accordingly, I appointed Dr. James C. Wilson to the vacancy.

The Commitee reports actually in hand a little over $11,000. This sum is too large to go backward, and it is not enough to go forward. In the hands of various state organizations, and possibly others, there are several thousands of dollars, I believe, which have been pledged to this fund. I recommend that action be taken, looking to the early completion of the fund. All the more is this suitable, when we remember that there will be erected in the city of Washington this year, or early next, a costly monument to Hahnemann, for which Congress has given a site.

### THE ANTIVIVISECTION BILL.

Early in the session of the present Congress, there was introduced into the Senate, bill No. 34, commonly called the "antivivisection bill." The immense detriment that this would work both to man and animals was so evident that I deemed it my duty as your President to take the most active steps to prevent its becoming a law. I sent out letters to the president and secretary of every state medical society in the country, to prominent members of the profession in every state, to a large number of influential men in the profession all over the country, and to college presidents, and others who could direct public opinion, and by all means in my power strove to arouse a public sentiment against the bill. I wish to bear public testimony to the enthusiasm and the unanimity with which my appeals were received. *The profession in every part of the country responded* nobly and exercised a wide and, I believe, an enduring influence on senators and representatives in establishing and confirming their judgment as to the inhumanity of any such bill.

In response to a communication addressed to the chairman of the Senate Committee on the District of Columbia, a hearing was granted in Washington before the subcommittee having charge of the bill, at which both the friends and the opponents of the measure were present and presented their arguments. Among those who spoke against the bill were Drs. William H. Welch,[1] Henry P. Bowditch, H. A. Hare, William Osler, Mary Putnam Jacobi, George M. Kober, Howard A. Kelly, D. E. Salmon, Brig.-Gen. George M. Sternberg, surgeon-general U. S. A., Bishop Lawrence, of Massachusetts, and myself. Certainly a more able array of speakers could hardly have been obtained, and I wish in *your name, and in the name of humanity,* to thank them for their self-sacrificing help.

Although in two prior Congresses the Committee on the District of Columbia had unanimously reported in favor of the bill, I am happy to say to you that the present committee has so far changed its views that I have reason to believe that the bill will either slumber in committee or be reported negatively. While it is to be hoped that this is the end of the present bill, it is by

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1. THE JOURNAL May 19 and 26.

no means certain that it is the end of the agitation of those who are so blind to the progress of medicine and, therefore, to the dictates of humanity, but, I have no doubt that the effort will be renewed at some future time. If this should take place, I commend to the then President of the AMERICAN MEDICAL ASSOCIATION the duty of opposing the bill with all the vigor which he can use.

Among the important contributions to antivivisection literature evoked by this discussion, none is more valuable than the letter addressed to the Chairman of the Committee on the District of Columbia, in opposition to the bill, by President Eliot, of Harvard College, which I venture to read to you:

HARVARD UNIVERSITY.

CAMBRIDGE, March 19, 1900.

*Dear Sir:*—I observe that a new bill on the subject of vivisection has been introduced into the Senate, bill No. 34. This bill is a slight improvement on its predecessor, but is still very objectionable. I beg leave to state very briefly the objection to all such legislation.

1. To interfere with or retard the progress of medical discovery is an inhuman thing. Within fifteen years medical research has made rapid progress, almost exclusively through the use of the lower animals, and what such research has done for the diagnosis and treatment of diphtheria it can probably do in time for tuberculosis, erysipelas, cerebrospinal meningitis, and cancer, to name only four horrible scourges of mankind which are known to be of germ origin.

2. The human race makes use of animals without the smallest compunction as articles of food and as laborers. It kills them, confines them, gelds them, and interferes in all manner of ways with their natural lives. The liberty we take with the animal creation in using utterly insignificant numbers of them for scientific researches is infinitesimal compared with the other liberties we take with animals, and it is that use of animals from which the human race has most to hope.

3. The few medical investigators can not properly be supervised or inspected or controlled by any of the ordinary processes of Government supervision. Neither can they properly be licensed, because there is no competent supervising or licensing body. The Government may properly license a plumber, because it can provide the proper examination boards for plumbers; it can properly license young men to practice medicine, because it can provide the proper examination for that profession, and these boards can testify to the fitness of candidates, but the Government can not provide any board of officials competent to testify to the fitness of the medical investigator.

4. The advocates of antivivisection laws consider themselves more humane and merciful than the opponents of such laws. To my *thinking these unthinking advocates are really* cruel to their own race. How many cats or guinea-pigs would you or I sacrifice to save the life of our child or to win a chance of saving the life of our child? The diphtheria-antitoxin has already saved the lives of many thousands of human beings, yet it is produced through a moderate amount of inconvenience and suffering inflicted on horses and through the sacrifice of a moderate number of guinea-pigs. Who are the merciful people—the few physicians who superintend the making of the antitoxin and make sure of its quality or the people who cry out against the infliction of any suffering on animals on behalf of mankind?

It is, of course, possible to legislate against an improper use of vivisection. For instance, it should not be allowed in secondary schools or before college classes for purposes of demonstration only; but any attempt to interfere with the necessary processes of medical investigation is, in my judgment, in the highest degree inexpedient, and is fundamentally inhuman.

Very truly yours, C. W. ELIOT.

HON. JAMES MCMILLAN.

Coming from such a high source, I can not but feel that it will carry conviction, both by the force of its statements and the lucidity of its logic. I call your especial attention to the ground taken by President Eliot, *that it is the antivivisectionists* who are inhumane and cruel to the last degree, because they would condemn both man and animals to suffering and death by impeding the progress of medical science.

### MEMBERS OF THE AMERICAN MEDICAL ASSOCIATION.

By its constitution, the members of the ASSOCIATION consist: 1, of delegates; 2, of members by invitation; 3, of *permanent* members, and 4, of members by application. I wish to call your attention to the desirability of limiting the members by invitation to foreign delegates, eminent foreigners whom the Sections may desire to invite to read papers and take part in the discussion, to members of the medical staff of the United States Army, Navy and Marine-Hospital Service, and to the occasional visiting physicians from our possessions outside of the limits of the United States proper. It has been the custom in most of the Sections to invite medical men of distinction who are not members of the ASSOCIATION to read papers before the Sections. Some of these gentlemen have been even openly hostile to the ASSOCIATION, and yet year after year have had the courtesies of the ASSOCIATION extended to them. They have availed themselves of these privileges and advantages and yet not only privately, but sometimes publicly, have expressed their hostility to the ASSOCIATION.

It seems to me that the time has now come when this practice should cease. Membership in the ASSOCIATION is open to every American, and any one who does not choose to avail himself of the privileges and advantages of membership by joining the ASSOCIATION should be debarred from them.

During the present year I have sent a courteous circular letter to each person so invited by the various Sections, but not a member of the ASSOCIATION, enclosing a form of application and inviting him to become a member of the ASSOCIATION. I am glad to say that a very large number have availed themselves of the opportunity of doing so. The Constitution prescribes that the members by invitation shall be invited by "the meeting after an introduction from and being vouched for by at least three of the members present or three of the absent permanent members;" and in the order of business, the third order is the "reception of members by invitation." No such formality, it seems to me, is desirable. The extending of such an invitation to distinguished foreigners and others that I have suggested may well be left in the hands of the Sections, with the exception, it might be, occasionally of persons of unusual distinction.

### SECTION ON PATHOLOGY AND THE PATHOLOGIC EXHIBIT.

One of the important features of the AMERICAN MEDICAL ASSOCIATION is to promote the scientific side of medicine. It has seemed to me that the ASSOCIATION was not fulfilling its duty to scientific medicine in one particular. There is scarcely a more important branch of modern medicine than pathology and bacteriology, and yet no Section for the consideration of these subjects is provided. Although it was not authorized by the ASSOCIATION, I had such confidence in your intelligent and hearty co-operation that I ventured to ask a number of gentlemen to act as a provisional or unofficial committee to organize a Section on Pathology and Bacteriology, under the chairmanship of Dr. Ludvig

Hektoen, of Chicago. These gentlemen have ably performed their task and they have presented a most attractive program. You will be asked officially to authorize the formation of such a Section, and I can not doubt what your action will be.

In connection with this, I also appointed a provisional or unofficial committee on a pathologic exhibit, in charge of a committee, of which Dr. Joseph Stokes, Moorestown, N. J., is the chairman. Dr. Frank B. Wynn, Indianapolis, Ind., has acted as secretary of both committees. I but ask you to visit the adjoining exhibit to be convinced of how faithfully and intelligently this committee has performed its task. They communicated with a large number of medical schools, museums, and individuals and have met with a most hearty response from all sides. They did not deem it wise that the exhibit should be either by states or by institutions, lest there should be aroused a rivalry, which would in some sense smack of egotism and lead to future disaster; but asked all to subordinate their individual and institutional interests to the broad general interests of science.

### THE ANNUAL EXHIBIT.

The management of the annual exhibit is a matter of considerable importance to the Association. The exhibit is an important financial aid to the local committee which has charge of the meeting of the Association.

So far as I know there are no rules governing the charges, the classes of exhibits, or other regulations by which this committee may be guided. Each new committee is a law unto itself. It has seemed to me that if there could be a permanent committee on the annual exhibit, this would be of great advantage, especially if the committee were made up, in part at least, of those who had had experience with former exhibits. It would seem to be desirable that each year the chairman or some other member of the committee on the last exhibit should be added to the committee to replace one of the earlier members, who would retire. I recommend, therefore, that such a committee, to have charge of the exhibit at the annual meeting, be appointed this year, this committee to have power to add to its numbers and nominate a chairman who shall reside in the place at which the succeeding meeting is to be held, and as many other local members of the committee as may be deemed necessary to carry on the work. The general committee could formulate general rules governing the exhibit and the local committee could carry out the details.

### THE SECTIONS.

The work of the Sections has been, heretofore, in many respects admirably done. The tendency to correlate the papers which are presented under certain specific heads, and to select one or more important topics for consideration, inviting a few distinguished speakers to open the debate, which is then thrown open to all, has been marked in the last few years. The advantages of such a course are so obvious that I trust the chairmen, secretaries and executive committees of the various Sections will hereafter strive for even more important debates and more important results than have been thus far achieved. Room should certainly be reserved for a certain number of volunteer papers, but to allow the major part of the time of the Sections to be taken up by a mass of heterogeneous papers on unrelated topics would be a great misfortune.

The policy of The Journal also, in connection with the various papers read before the Sections is an important one. Papers vary greatly in their merit and importance, and it would seem to me that to the trustees and the editor of The Journal should be confided the entire responsibility of selecting the more important papers for publication in full, and of presenting the less important in longer or shorter abstracts. The example of the *British Medical Journal* may well guide us in this matter.

I ventured to correspond with the chairmen and secretaries of the various Sections as to the hour of the Section dinners. Very frequently this has been fixed at nine o'clock, an hour which was too late for the usual dinner and too early for a second one. Moreover, when the dinners are fixed at so late an hour, if they are to be followed by after-dinner speeches the hour at which the Sections can break up and seek a much-needed rest is so late that it interferes seriously with the work of the succeeding day. Almost without exception, the officers of the Sections preferred the usual dinner hour, about seven o'clock, both for material and intellectual reasons. It is often difficult to arrange this matter with the hotels at which the dinners are usually given, but the Association, I think, might insist, as but a single evening is occupied by these dinners, that for the one occasion the hotels who profit so largely by the meeting should accommodate the Association in this matter.

### THE COMMITTEE ON THE THIRTEENTH INTERNATIONAL MEDICAL CONGRESS.

Early last autumn Prof. William Osler, who had been requested to organize the American Committee on the coming International Congress, invited the President of the American Medical Association, and the Presidents of the various associations of medical specialists to form a committee to assist in organizing the International Medical Congress which is to assemble on August 2, in Paris. This Committee, and especially its chairman and secretary, have done the work exceptionally well. Of course, there is need of money for printing, postage, and clerk hire. At a recent meeting in Washington, the various societies, represented by their chairmen, were invited to contribute $25 each toward the expenses. I recommend that an appropriation of $50 be made from the funds of the American Medical Association toward the expenses of this committee.

### ENDOWMENT OF MEDICAL SCHOOLS.

Turning, now, from the affairs of the Association, I wish to say a few words in reference to a subject of paramount importance which I am sure will appeal to the sympathies of all present, namely: the need for endowments for medical schools.

The tide of charity in the United States has reached a remarkable height. The *Chicago Tribune* publishes an annual list showing that in 1894 the charitable gifts and bequests in the United States amounted in round numbers to $20,000,000; in 1895, to $29,000,000; in 1896, to $34,000,000; in 1897, to $34,000,000; in 1898, to $24,000,000; and in 1899, to the enormous sum of nearly $80,000,000.

But a small portion of this charity, however, has been bestowed upon medical schools. It is mostly to colleges, theological schools, hospitals, museums, and libraries, that the principal amount has been given. The cause for this, I think, has been chiefly the vicious method in which all our medical schools were formerly conducted. They were practically joint-stock companies, organized for the benefit of the faculties. As Professor Bowditch has said, one might as well expect the public to endow a cotton-mill as to endow such a school. The day of these private enterprises is now, happily, nearly past. The respectable schools of medicine are now conducted by trustees, a body of men wholly apart from the faculties, who manage the affairs of the medical school just as they would those of a university, taking control of the income and expenditures of the school, placing the professors and other teachers upon salaries, and conducting the affairs of the institution on broad lines of educational progress. Partly as a result of the influence of the profession exerted through the Association, the courses of study at the medical schools of to-day, and, therefore, the necessities of the student, are so wholly different from those of twenty-five years ago that it may be well termed a new era in medical education. As a consequence of the broadening and lengthening of the medical course of study, the cost of medical education has enormously increased. The public at large does not at all appreciate this changed condition, and even you, members of the profession itself who may have graduated many years since, scarcely appreciate to its full value the difference. As a consequence, the fees of the students, which can scarcely be raised beyond the present amount, are wholly inadequate for providing a proper medical education, and the medical school appeals, as does the college and the theological and the technical school, for wise and liberal endowments in order to provide this suitable education. "There is no branch of education," says President Eliot of Harvard, "which more needs endowment. Medical education is very expensive, because it has become, in the main, individual instruction. Large lectures and crowded clinics are seen to be of really very limited application, so that year by year the medical teaching becomes more and more costly."

What were the necessities of a medical school twenty-five years ago? Two lecture-rooms, in which seven professors talked, a dissecting-room, and, if possible, a clinic, which was occasionally, but rarely, in a college hospital. Practically the instruction which the student obtained, with the exception of dissecting, was limited to "book-knowledge" and "ear-knowledge." The student was not brought into contact with any patients or any concrete facts, observations, or experiments. He only listened to what his teachers said about them. Millions were given to hospitals in which the sick were treated, but only sixpences to medical schools, in which the men who are to care for their future patients were trained. "Spain," says Lyman Abbott, "in the late war had nineteenth-century guns and sixteenth-century men behind them. We know what came." Our splendidly-equipped hospitals are the nineteenth-century guns. Insufficiently trained doctors are the sixteenth-century men. The time has certainly come when the "men behind the guns" must equal in efficiency the weapons with which they do the fighting.

To perform a tracheotomy and rescue a child suffering from diphtheria is a dramatic occurrence which appeals to every one. To conduct a long series of experiments in the laboratory, by means of which the cause of diphtheria shall be found and the necessity for a tracheotomy avoided, appeals only to the educated few; yet the service done by the operation is a service only to the one patient who may be rescued by the knife, while the other is a service to hundreds and thousands of patients who, for all time, will escape both the knife and the disease. Yet, such a series of experiments in preventive medicine brings no reward in money, a limited reward in fame, and only its largest reward in the consciousness of giving a great boon to humanity, for which it never can pay.

The era of the man who simply listened to what his teachers had to tell him and then went on his way, as a "rule of thumb" man, is happily past. This is the era of the trained man and the trained woman, and training means opportunity provided by the community and time, labor and money given by the man.

Let us look for a moment at what a medical school now needs. It stands for two things: 1. "Thing-knowledge," instead of "book-knowledge" and "ear-knowledge," teaching the facts of modern science, by scientific methods; that is to say, methods of precision. But 2, no medical school should be content simply with imparting the knowledge that exists. It should push back the boundaries of ignorance and, by research, add to existing knowledge.

In the accomplishment of the first duty of the medical school, there are required, first, didactic lectures. I am not one of those who believe that the day of the didactic lectures is past. "Never," said President Faunce, of Brown University, in his notable inaugural, "never shall we be able to do without the personality of the teacher, flaming with enthusiasm for knowledge, pressing up the heights himself and helping the student on."

In the 156 medical schools in this country there are, perhaps, over 1500 members in their faculties. In all of them are inspiring teachers flaming with enthusiasm, for a not inconsiderable proportion may properly be so described, and the influence of such enthusiastic teachers is felt by the entire class. One or two such men in every school make a good faculty.

Besides the didactic lectures, a good working library and a reading or study room is a requisite. And it is a matter of no little encouragement that in the reports of the U. S. Commissioner of Education for 1898, 72 medical schools reported 151,433 volumes in their libraries.

The great difference between the modern method of teaching medicine and the older method consists in *laboratory instruction* and *clinical instruction*, both of which must be individual. Laboratories are very costly. They require buildings, equipment, and assistants. The number of laboratories required in the present day in a fully equipped medical school is astonishing. First, the dissecting-room—the anatomical laboratory—and along with this a laboratory of histology, and another which may be combined with it, a laboratory of embryology. Next, a physiological laboratory, in which each student will not become an accomplished physiologist, but will become familiar with physiological methods and be trained in exact and careful observation; a laboratory of chemistry and, combined with it, especially, a laboratory of physiological chemistry; in the department of materia medica, a laboratory of pharmacy, where the student will not become a good pharmacist, but will learn the essentials of pharmacy so that he will not make, at least, gross mistakes, which, otherwise, would constantly occur. Still more important is a laboratory of pharmacology, in which he will learn the action of drugs and be prepared rightly to use them. In obstetrics, a laboratory of practical obstetrics and obstetric operations is essential. In surgery, he needs a laboratory in which he shall be taught all the ordinary surgical operations. In pathology, he needs a laboratory of morbid anatomy, a laboratory of bacteriology, and a laboratory of hygiene. The mere statement of this catalogue of thirteen laboratories will enforce the fact that enormous expense not only for the installation, but also for the running expenses, will be required. To show what one university abroad does, Professor Welch has stated[2] that the Prussian government expends, outside of the salaries of professors in the University of Berlin alone, over $50,000 annually. What American medical school can show anything approaching an endowment which will provide such a sum?

And what has not the laboratory done for us within the last few years. It has discovered the cause of tuberculosis, tetanus, suppuration, cholera, diphtheria, bubonic plague, typhoid fever, erysipelas, pneumonia, glanders, and a host of other diseases; it has shown us how to avoid all danger from trichina, so that our entire commerce in hog-products is conditioned upon the laboratory; it has shown us how to banish suppuration, erysipelas, tetanus, and pyemia from our hospitals and reduce our death-rates after operation from 50 or 33 per cent. to 10 per cent., 5 per cent., 1 per cent., and often even fractions of 1 per cent; it has given us a really scientific hygiene in which we no longer guess but know; it has shown us the rôle of the mosquito in malaria, of the rat in bubonic plague, of the fly in typhoid fever; it has given us the power to say to diphtheria "thus far shalt thou go and no farther;" it will give us the power to utter a pæan of victory over typhoid, cholera, bubonic plague, tuberculosis, yellow fever, cancer, and other implacable enemies of the human race—and yet there are those who would stay this God-given hand of help!

And the laboratory has had not only its devotees but its heroes. Listen to the story of but one. Dr. Franz Müller, of Vienna, was one of those who in his investigations of the bubonic plague in 1897 contracted the dreaded disease from the bacilli in his culture-tubes. When he became certain that he was infected he immediately locked himself in an isolated room and posted a message on the window pane, reading thus: "I am suffering from plague. Please do not send a doctor to me as, in any event, my end will come in four or five days." A number of his associates were anxious to attend him, but he refused to admit them and died alone, within the time he predicted. He wrote a farewell letter to his parents, placed it against the window, so it could be copied from the outside, and then burned the original with his own hands, fearful lest it might be preserved and carry the mysterious germ. Can you find me a finer example of self-sacrificing altruism? Was ever a Victoria Cross more bravely won?

But the establishment of laboratories, with their attendant expenses, is not the only improvement in our medical curriculum. Every well-conducted medical school requires a large hospital in connection with it. Here must be installed again a fourteenth laboratory of clinical medicine in which all the excretions of the body will be examined, tumors studied, cultures and blood-counts made, or else the patients in the hospital, from the modern point of view, are neglected. It is not too much to say that a patient requiring such examinations, be he the poorest of the poor, has his case more scientifically studied, more exactly measured, more precisely treated than most rich patients in sumptuous homes.

Again, the individual instruction to which President Eliot referred is now carried out in all of our best medical school hospitals by the establishment of small ward-classes, by whom or before whom the patients are examined, prescribed for and operated upon by the professor or instructor, each student bearing a part; and so, by having his investigations directed, his powers of observation cultivated, his mistakes pointed out, his merits applauded, the student graduates from the medical school equipped as none of us, alas, ever had the opportunity to be. All of these laboratory and ward classes imply an enormous increase in the number of assistants, young men striving not only to perfect themselves, but by teaching, to forge to the front so that the best men will win in the struggle for preferment.

Again, the course of study has been prolonged from two years, as it was 20 to 25 years ago, to four years, and in addition the terms have also been lengthened. When I was a student the course of study consisted of two sessions of about 19 weeks each, or 38 weeks in all. Now the course consists, as a rule, of four sessions of 32 weeks each, or a total of 128 weeks, an increase of 90 weeks, nearly 3½ times as much as it was 25 years ago. In 1885, 103 schools had courses of two years, and 5 schools courses of three years. In 1899, 2 schools had courses of two years, 10 of three years, and 141 of four years.[3].

It can be easily seen that from this additional time required another source of expense has arisen besides the increased number of assistants. The time given to teaching by members of the faculty, as a rule, has been more than tripled, as compared with twenty-five years ago. In addition to this, professors in charge of laboratories must practically give their whole time to the work and are precluded, therefore, from any income from practice. These men must receive salaries sufficient for them to live on.

Surely this statement of the difference between the education given twenty-five years ago, which required but little expenditure of money and resulted in considerable incomes, and the modern methods of education in the laboratory and the hospital, as well as the lecture-room, which require enormous expenses, is an ample reason for large endowments.

But, the function of the medical school, as I have said, should not be limited merely to the imparting of existing knowledge. No school is worthy of the name that does not provide for greater or less research work by which substantial additions to our knowledge may be made and the facilities and the results of the healing art made more efficient for the welfare of mankind. Twenty-five years ago there were practically few young men who were fitted for research work, especially laboratory work. Now every well-equipped school has attached to it, in one way or another, a score or more of young men who are eager for work, longing for the opportunities for usefulness and distinction if they can only obtain a bare living. When in my own school I look around me and see these young men thirsting for such opportunities, I am often heartsick at our want of facilities for this purpose, and I long with an intense longing for some wise and munificent friend of humanity who will endow post-graduate scholarships, fellowships and laboratories for just such an end. Our hospitals do a magnificent work in charity, helping the sick and the forlorn, the weak and the suffering in a way which appeals to the charitable instincts of our fellow-countrymen, and to this appeal they have responded most generously. *But I venture to say that the medical school which trained a Lister, a Pasteur or a Koch has done more for humanity than all the hospitals of this country combined.* The modest laboratory at Würtzburg consisted chiefly of a Ruhmkorff coil, and a Crookes' tube—and Röntgen. Other Röntgens and Listers we have among us if we but knew it. These are the men who are the world's *real* illustrious heroes.

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[2] Higher Medical Education and the Need for Its Endowment. *Medical News*, July 21, 1894.

[3] Monographs on Education in the U. S.: No. 10, Professional Education, p. 11. James Russell Parsons, Jr., Dept. of Education for the U. S. Commissioner to the Paris Exposition of 1900.

It is especially in these days that in America we need such researches, for our tropical possessions have brought us face to face with new problems which we can only justly meet by the most careful investigations. It is to our credit that several of our medical colleges have already established schools of tropical medicine, which show that the profession, as well as the public, are rising to the level of our responsibilities and duties.

It is also a cheerful sign of the times that at Harvard a School of Comparative Medicine has been established, which will lead to other similar schools in connection with our medical colleges, for the broad study of disease both in man and in the lower animals. All such knowledge should be correlated, and we may well learn from the diseases of animals how to care for man, as thus far we have learned chiefly from the diseases of man how to care for animals. The endowment of this school with the modest sum of $100,000 is an omen of future good. So too, the somewhat similar school at Buffalo bids fair to add immensely to our knowledge and therefore to our ability to heal.

What now has the American public done for the medical school? Let us contrast it with the endowments in theology. Our academic institutions have such an enormous sum-total of endowments that I do not even consider these. Let us, however, compare theology and medicine, remembering that theology is almost wholly a literary study, dealing not with the facts of Nature, requiring no laboratories and no large corps of assistants and therefore conducted at a minimum of cost. In 1898[4] 84 theological schools reported endowments of $18,000,000, and 71 schools do not report this item; 19 out of 151 medical schools report endowments of $1,906,072. Five theological schools have endowments of from $850,000 to $1,369,000 each. Yet in 1899 there were only 8000 students of theology for whom this enormous endowment was provided, as against 24,000 students of medicine. Each theological student had the income of an endowment of $2,250 provided for his aid, each medical student the income from $83. As against 171 endowed chairs of theology there are only 5 in medicine.

I do not grudge a dollar to the theologian, but I plead for his medical brother, that, with a vastly more expensive education he shall have a reasonable provision made for his training.

I have already indicated to some extent the direction which these endowments of medical schools should take. They may be classed in threee categories: 1. The endowment of professorships. By doing this the salary of the professor would be made available for the other wants of the school. The endowment may well take the form of a memorial, either of the generous donor, or, still better, of some distinguished former occupant of such chair whose name would always add luster to it. 2. The endowment of the laboratories which, as I have indicated, are so costly, both in their installation and in their yearly expenses. 3. The endowment of post-graduate scholarships and research fellowships, these being intended especially for those who will devote their time to original research. Students can not take much time for original research; their regular studies will absorb all their energies. Research must be done chiefly by young graduates under the direction of stimulating and energetic members of the faculty.

It is not, I trust, too much to hope, if not now, that in the near future the American Medical Association will set a fruitful example by giving each year "Scientific Grants in Aid of Research." The first object of the Association must be, necessarily, to place itself on a strong financial basis. It should own its own building, its printing and publishing plant, and, as soon as possible, should have a reserve fund of considerable proportions. Nothing conduces to the stability and conservativeness of any institution like a good bank balance. The British Medical Association has to-day an excess of assets over liabilities of nearly $380,000, chiefly invested in its building at 429 Strand, London. The American Medical Association has made a fair start with a surplus of over $27,000 last January, and, with its large, and, let us hope, rapidly increasing membership, it will before long assume a rank second only to the British Medical Association. Last year[5] the Scientific Grants Committee of the British Association allotted £741, or somewhat more than $3,500, for research work, distributed to three research scholarships, the holders of which were paid $750 each a year, and thirty-three grants in aid of research work, varying in amounts from $25 to $100. Among those to whom grants were made occur the well-known names of Beevor, Vaughan Harley, Kanthack, Luff, Manson, Noel Payton, and Risien Russell. I should hope that the American Medical Asociation might even now begin by a modest appropriation, say of $500 a year, which should be allotted by the trustees, or by a special committee on scientific grants, after a careful investigation of the merits and the character of the person to whom such grants were made. No grant should exceed $100, or possibly even, at first, $50 in amount. The results of such grants would be not only absolute additions to our knowledge, but the cultivation of a scientific spirit which would permeate the whole profession and elevate its objects and aims

In pleading for these endowments of medical schools. it is but a plea for a return to the profession of a tithe of what they have given. Two years ago I carefully investigated the value of the services rendered to the poor in the city of Philadelphia by the medical staff of the Jefferson Medical College Hospital alone, and I found that 129 medical men were then attached to the hospital, and their services, calculated on a moderate basis of ordinary fees, I valued at over $500,000 annually. To a profession which gives so freely of that which is most difficult to give, its own life-blood, surely the public for its own protection may give reasonable endowments to its medical schools. It will be returned to the community tenfold in better educated, better trained and more successful doctors. More devoted, self-sacrificing men and women they never can have.

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[4] U. S. Education Report.

[5] Brit. Med. Jour., 1899, ii, p. 219.

# CONCLUSIONS REACHED AFTER A STUDY OF TYPHOID FEVER AMONG THE AMERICAN SOLDIERS IN 1898.

ORATION ON STATE MEDICINE BEFORE THE FIFTY-FIRST ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION AT ATLANTIC CITY, N. J., JUNE 5-8, 1900.

BY VICTOR C. VAUGHAN, M.D.
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It is well known that typhoid fever prevailed extensively among American soldiers assembled at state and national encampments during the brief war between the United States and Spain in 1898. In August of that year a board, consisting of Major Walter Reed, U. S. A., Major E. O. Shakespeare, U. S. V., and the writer, was appointed at the request of the Surgeon-General of the U. S. Army, for the purpose of ascertaining the causes of the existence and spread of typhoid fever in the national encampments, and of suggesting means of its abatement. In accordance with instructions, this board visited the national encampments and inspected most of the regiments. While doing this, we interviewed medical and line officers, and obtained as far as possible the sanitary and medical history of each regiment. After completing this tour of inspection, we spent about eighteen months in going over the medical records of these commands. In this work we have accumulated a vast amount of information, which we have embodied in our final report to the surgeon-general. Since much of this information may be useful to the profession, and as the report is not likely to be published soon, I have concluded that I can not do better than present some of the more important results reached in this investigation. In doing this, I wish to state that I am responsible for any failure that I may make in these statements, as this paper has not been submitted to my colleagues on the board. It will be necessary for me to condense my remarks in the form of conclusions, stated somewhat dogmatically, and dependent on the full report for further elucidation. These conclusions I will proceed to give:

1. *Every regiment in the United States service in 1898 developed typhoid fever.*—This is true of both volunteer and regular commands. I am aware of the fact that some regiments have claimed freedom from typhoid fever, and it is true that the sick reports of more than one command fail to show any evidence of this disease; but by carefully tracing the sick to hospitals, we have been able to find one or more cases of typhoid fever in every regiment. The claim is made by an assistant-surgeon of one of the Pennsylvania regiments that there was not a case of typhoid fever in his command, but the records of the Philadelphia hospitals show that certain cases sent from this regiment proved to be typhoid fever. It is true that this regiment, which was engaged in guarding powder works in New Jersey and Delaware, had relatively few cases of typhoid fever, but it did not altogether escape this disease. Official statements that certain commands escaped typhoid fever have been made. Gen. H. V. Boynton, chairman of the Chickamauga and Chattanooga National Military Park Commission, in his report to the Secretary of War, under date of Oct. 17, 1899, makes the following statement:

> At the time the camp was abandoned, it is true that there was much sickness, and that a condition approximating panic prevailed with many officers and surgeons. There were large numbers of fever patients in the hospitals. Seven battalions of troops—four colored, under Col. E. L. Huggins, of the Eighth United States Volunteer Infantry, and three white, under Col. L. D. Tyson, of the Sixth United States Volunteer Infantry—were left at the camp. The strictest sanitary measures were at once adopted by these officers, and were also rigorously enforced, both as to the camp sinks, the cooking of food, and the eating of trash, and the drinking of slop. The result was that, notwithstanding they were encamped in the same sections of the park (Chickamauga) where the departing troops had been, not a case of fever developed in either of these forces; nor did a death incident to camp disease occur.

This positive statement from one so high in authority needs careful investigation. Moreover, it will be of special interest to inquire somewhat in detail as to whether or not these regiments, by the practice of strict sanitary precautions, were able to encamp in Chickamauga Park, which at that time was widely contaminated with matter specifically infected with typhoid fever, without developing one or more cases of the disease.

The Sixth U. S. Volunteer Infantry assembled at Knoxville, Tenn., where it was mustered into the service of the United States on July 14, 1898. It remained in this camp until July 31. While at this place it had a most excellent supply of water—that furnished West Knoxville. Fecal matter was deposited in sinks which were fairly well policed, the contents being covered with dirt and lime twice a day. The health of the command seems to have been good, but soon a case of typhoid fever appeared. Very shortly after the regiment had been mustered in, one man, an athlete, who had been traveling about the country, complained of being ill and was granted sick furlough. This proved to be a case of typhoid fever. This command reached Chickamauga Park about 11 p.m., July 31. It rested for the night near the Second Brigade of the Second Division of the Third Army Corps. The next morning it was moved near the water-tower, on ground quite remote from that occupied at the time or previously by any command. On the morning of August 1, eight men reported at sick-call, but none of the cases proved to be serious. I have studied the records of this regiment carefully, and find no evidence of typhoid fever in it after it reached Chickamauga, until August 24, when a private from Company C was sent to the hospital of the First Division of the Third Army Corps. This case was diagnosed "malaria," and the man remained in the hospital only five days when he was discharged on furlough, but at the expiration of his furlough he was unable to return to his regiment. The probability is that this was a case of typhoid fever. On August 27, another case of so-called "malaria" was sent to the same hospital, and was furloughed four days later. This man also was unable to return to duty when his furlough expired. From September 1, until the regiment left Chickamauga, numerous cases of recognized typhoid fever were sent from this command to the Sternberg Hospital. One man, admitted to this hospital on September 1, died September 5, and was probably in the second week of the disease at the time of death. This man was a sergeant and had never failed to appear at sick-call in the morning with the men from his company. He expressed solicitude about himself two days before he was sent to the hospital, or, to be more explicit, on August 29. From August 24 to October 4, the date when this regiment left Chickamauga, 98 cases of protracted fever were sent from this command to Sternberg Hospital: 86 of these were diagnosed as typhoid fever, 11 as malaria, and 1 as dysentery. The man who was admitted to the hospital September 1, and who died September 5, was the first case of recognized typhoid fever occurring in this regiment after it reached Chickamauga. The appearance of this case caused considerable solicitude, and the regiment again changed its location, and its water-supply. However, as has already been seen, typhoid fever did not abate. On October 4, as has been stated, this regiment left Chickamauga and proceeded to Porto Rico. Typhoid fever continued to develop during the voyage and after reaching the island.

The Eighth U. S. Volunteer Infantry consisted of a regiment of colored troops, recruited largely in Kentucky, and was stationed at Fort Thomas until it went to Chickamauga Park on October 8. In the August report of this command, there is 1 case of recognized typhoid fever. In the September report there are none and only 5 cases diagnosed as malaria, while only one of these was off duty for more than ten days. The October report shows 2 cases of recognized typhoid fever. The initial date of one of these was October 1, before the regiment left Fort Thomas; the initial date of the other was October 25, while the regiment was in Chickamauga Park. The November report shows no cases of recognized typhoid fever; but 2 diagnosed as malaria were of more than three weeks' duration, and 6 of fever, undiagnosed, are reported, and none of these patients had returned to duty up to Dec. 31, 1898.

2. *More than 90 per cent. of the volunteer regiments developed typhoid fever within eght weeks after assembling in the state encampments.*

It is impossible to fix any exact date on which the several regiments assembled at their state encampments. However, as the first call for troops was issued April 20, 1898, it must follow that at the earliest all regiments assembled at state encampments during the last week of that month. Bearing this in mind, our report will show that the great majority of the volunteer regiments developed one or more cases of typhoid fever within eight weeks after assembling at the state encampment.

3. *Most, probably all, of the regular regiments developed typhoid fever within less than eight weeks after going into camp.*

The following table shows the date of going into encampment and of the appearance of first cases of recognized typhoid fever in certain regular regiments:

| Command. | Date of going into Encampment. | Date of first case of recognized Typhoid Fever. |
|---|---|---|
| Second, U. S. I.......... | April 22, 1898. | May 28, 1898. |
| Fourth, U. S. I.......... | April 22, 1898. | May 18, 1898. |
| Sixth, U. S. I.......... | April 22, 1898. | May 19, 1898. |
| Seventh, U. S. I.......... | April 24, 1898. | May 26, 1898. |
| Thirteenth, U. S. I....... | April 23, 1898. | May 8, 1898. |
| Sixteenth, U. S. I........ | April 22, 1898. | May 20, 1898. |
| Twenty-second, U. S. I.... | April 22, 1898. | May 29, 1898. |
| Twenty-fourth, U.S.I. (col.) | April 20, 1898. | May 28, 1898. |
| Twenty-fifth, U.S.I. (col.) | April 20, 1898. | May 28, 1898. |

When war with Spain was proclaimed, the total strength of the standing army of the United States was 27,000 officers and men. These troops were scattered at about 100 military garrisons. All of the soldiers were well housed, and their quarters were, from a sanitary standpoint, in good condition. At each garrison, the water-supply was above suspicion, and the disposal of waste was such as not to endanger the health or the life of the soldiers. There was no epidemic at any post, and the army was reasonably free from infectious diseases except those of venereal origin. The number of cases of typhoid fever among the 27,000 officers and men during the first four months of 1898 was distributed as follows: In January, 9 cases with 1 death; in February, 3 with 1 death; in March, 4 with no deaths; in April, 6 with 1 death. During the last week of April and the first week of May, 1898, the regular regiments were assembled in national encampments and placed under canvas.

4. *Typhoid fever not only appeared in every regiment in the service, but it became epidemic, both in the small encampments of not more than one regiment, and in the larger ones consisting of one or more corps.*

The statement has been made that the epidemics of typhoid fever in our national encampments in 1898 were due to crowding together large numbers of men. The Third North Carolina Volunteer Infantry, at its isolated post at Fort Macon, N. C., developed typhoid fever before it was sent to Knoxville, where it became a part of the Second Division of the Frst Army Corps.

When we reached Knoxville, Tenn., in our round of inspecting the troops, we were informed that the Fourth Tennessee was encamped near that place, where it had been since mobilization, and that it was wholly free from typhoid fever. A personal investigation showed the following facts: This regiment assembled June 28, although it was not mustered into United States service until about the middle of July. On August 12, Ernest Martin, who had not been well for a week preceding this time, was admitted to the regimental hospital. On August 15 he was furloughed, and on September 11 he died at his home in Nashville, Tenn., of typhoid fever. From the date of this first case up to the time of our inspection (Sept. 14, 1898) there had been in this regiment not less than 11 well-marked cases of typhoid fever, although none had been so diagnosed by the regimental surgeon.

The Fifteenth Minnesota, at its regimental encampment at the Fair Grounds at St. Paul, Minn., and the Thirty-fifth Michigan, at Island Lake, Mich., developed epidemics of typhoid fever. Other instances might be cited, but these suffice to show the truth of the statement that the disease became epidemic in small as well as large encampments.

5. *Typhoid fever became epidemic in camps located in the Northern as well as in those located in the Southern States.*

Some medical officers have placed stress on the fact that Northern men were transferred to the Southern States in the summer time, and have attached considerable importance to the influence of non-acclimatization in the production of the epidemics of typhoid fever. In answer to this, we need only call attention to the fact that the Fifteenth Minnesota, Thirty-fifth Michigan and the Two Hundred and Third New York furnished large numbers of cases of typhoid fever, practically all of which developed before they crossed the Mason and Dixon line. There is nothing more certain than that the prevalence of typhoid fever among the troops in 1898 was not due to geographic location.

6. *Typhoid fever is so widely distributed in this country that one or more cases are likely to appear in any regiment within eight weeks after assembling.*

We have no reliable data concerning the extent to which typhoid fever prevails in this country, but from the number of deaths due to this disease, we can fairly estimate the number of cases. The following figures may give us some idea as to the chance of infected men being found in each volunteer regiment. In making these calculations, we will figure on the number of cases of typhoid fever in New York City. This city is selected because it is not subject to epidemics of this disease, and in fact, is believed to be unusually free from it. Supposing that typhoid fever is no more deadly there than it is in Hamburg, and there is no reason for believing it is, then 299—the number of deaths from typhoid fever in New York City in 1897—is about 7.5 of the total number of cases of typhoid fever that occurred in that city in the year given. On making this computation, we find that there probably were 3986 cases of typhoid fever in New York City in 1897. It is safe to say that at least four-fifths of the cases of this disease occur in individuals of military age—between 18 and 45. This means that in 1897 there were in New York City 3188 cases of typhoid fever among those inhabitants who were from 18 to 45 years of age. The government census for 1890 gives that city's population at that time as 1,515,301. A police census made, in April, 1895, indicated a population of 1,849,866. I will be liberal in my calculation and suppose that its population in 1897 was 2,000,000. In round numbers, the number of people between 18 and 45 years of age is one-half the total population. On this basis, the number of people of military age in New York City in 1897 may be placed at 1,000,000—this includes both males and females. Had this 1,000,000 people of military age been divided into regiments of 1300 each, they would have furnished 769 commands. We have seen that the number of cases of typhoid fever there among people of military age was probably 3188, and if these had been evenly divided among the regiments of 1300 each, each command would have contained at least four persons who in all probability would develop typhoid fever during the year. I make no claim that the above given figures are accurate. I have presented them simply for the purpose of showing the chances of there being men infected with typhoid fever in every regiment of volunteers. I think that it must be admitted that there is not much difficulty in accounting for the origin of typhoid fever in our national encampments. With this disease as prevalent as it is throughout the country, it is more than probable that in any organization of 1300 men of military age, taken from private life and held together for two months, one or more cases will develop.

7. *Typhoid fever usually appears in military expeditions within eight weeks after assembly.*

The following quotations taken from a paper on "Enteric Fever in Camps," by Surgeon-Captain Davies, assistant professor of hygiene at the English Army Medical School, illustrates the above statement:

> In the Galeaka-Gaika War in South Africa, the troops crossed the River Kei in December, 1877, in the hot and dry season. Diarrhea and "simple continued fever" soon became prevalent, but the general health was good. In the middle of January, 1878, heavy rains came on. Several cases of enteric fever occurred toward the end of the month. In February sickness increased, consisting principally of diarrhea, dysentery, and common continued fever. Bowel complaints diminished toward the end of March, but as the cold weather came on, enteric fever, at first mild and insidious, occurred throughout the country; and in May it is reported that no place was free from it.
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> In the Zulu War, which commenced at the end of December, 1878, fever appeared at the headquarters at Helpmakaar, and at Rorke's Drift, in the middle of February, accompanied by diarrhea and dysentery; the fever was thought to be "bilious remittent," or "enteric," or a mixture of both. Helpmakaar became so unhealthy that the troops had to be moved to Utrecht and Dundee. Epidemics of enteric fever immediately broke out at both of these places.
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> In the Afghan campaign of 1878-1880, it is noted that cases occurred at almost all the stations occupied by European troops stretching from the Indian frontier to Kabul and Kandahar. Some of these posts had probably never been occupied before, and many of these cases were quite isolated.
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> In the Egyptian expedition of 1882, there was great prevalence of bowel complaints, from the first landing of the troops in the latter part of July—diarrhea, dysentery and fever. Enteric fever occurred very soon, both at Alexandria and at Ismailia. When the troops arrived at Cairo, the disease increased gradually, but did not reach any great prevalence until October and November. During October, November and December, out of a total of 319 deaths no less than 223 were due to enteric fever.
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> In the Nile campaign, in 1884-85, a great number of isolated posts were occupied, extending over a large tract of country. Enteric fever occurred at all or nearly all of these posts, most severely at Assuan and Wady Halfa.
>
> During the French operations in Tunis in 1881, the disease was extremely prevalent, about one-fifth of the whole force being attacked. It has been stated that all the columns on the march, and nearly every occupied post were attacked more or less. In some instances bodies of troops suffered from the disease who had never been in contact with other (infected) troops, and who had not occupied any old (infected) encampments.

I have brought in these quotations in order to show that typhoid fever generally appears in military expeditions. Similar experiences are recorded in the history of mining camps in various parts of the world.

8. *The miasmatic theory of the origin of typhoid fever is not supported by our investigations.*

There are still some who believe that typhoid fever is due to a poison or miasma given off from the earth in gaseous form. I would not mention this obsolete theory were it not for the fact that while inspecting the camps we found intelligent medical officers who believed that some intangible local condition inherent in the place was an important factor in the production of the epidemic. There is apparently in man a tendency to believe in the evil genius of locality. He is prone to attribute many of his misfortunes to indefinable conditions surrounding the place in which he has suffered. As I have stated, no fact in our investigations has been brought out more prominently than the demonstration that locality was not responsible for the epidemics. The Fifteenth Minnesota first developed typhoid fever at the fair grounds at St. Paul. There is certainly no evidence that there is any evil climatic influence connected with this place. This command carried the epidemic with it to Fort Snelling, which has long had the reputation of being one of the most healthful army posts in the United States. From Fort Snelling the Fifteenth Minnesota was transferred to the open fields at Camp Meade, where generations of Pennsylvania farmers have passed the average number of years allotted to man without suspecting that their locality was an unhealthy one. However, typhoid fever continued with the regiment from Minnesota, because the men carried the germs of this disease in their bodies, clothing, bedding and tentage. Certainly, any rational being would prefer any of the above-mentioned localities to Port Tampa, Fla., as a place of summer residence, and yet there was not a regiment in the Fourth Army Corps, encamped for so long a time in Florida, that had as many cases of typhoid fever as did the Fifteenth Minnesota.

9. *The pythogenic theory of the origin of typhoid fever is not supported by our investigations.*

Murchison proposed this theory of the origin of typhoid fever. This author makes the following statement: "Typhoid fever may be generated independently of a previous case by fermentation of fecal, and perhaps other forms, of organic matter." Translated into terms of modern medicine, this theory is founded on the belief that the colon germ may undergo a ripening process by means of which its virulence is so increased and altered that it may be converted into the typhoid bacillus, or at least may become the active agent in the causation of typhoid fever. Many French, English and American army medical officers believe that typhoid fever may originate in this way. Rodet and Roux, of the French army, have stated their belief that outside of the body the colon bacillus acquires "typhigenic" properties. Surgeon-Captain Davies has expressed his belief in this theory, and some of the medical officers in the American army have also given it their adherence. Surgeon Davies gives the following statement of the reasons for his belief in this theory:

> It is well known that "camp diarrhea" is of the commonest occurrence among troops shortly after taking the field in a tropical and subtropical climate. Change of habits, change of food, improper or unsuitable food, bad water, heat and exposure to sun, and chill—these are all obvious factors in its causation; there is nothing in any way specific. Let us consider the sequel as regards the individual, and as regards his surroundings. The individual may in some cases remain in fairly good health and vigor in spite of a continuance of a bowel trouble; other individuals may suffer more, from the exposure, fatigue and weakening effects of the continued flux. The surroundings may possibly be and remain sanitary, the camp clean, the water pure; but in all probability the reverse will be the case, at any rate, in some instances; the water bad, the soil fouled, very likely overcrowding of the camp, with consequent difficulty, if not impossibility, of proper removal or disposal of fecal matter. Under certain conditions of heat and moisture, favorable to the development and multiplication of low forms of vegetable and animal life which is the more likely or reasonable to expect: That diarrhea in weakly and exhausted individuals should remain diarrhea and nothing more; or that with an increase of filth and decomposition, polluting soil, air and water, a development of filth-generated, pythogenic poison, should take place, capable of causing in such weakly persons a fever, with diarrhea, a poisoning of the organism, producing pyrexia and inflammation of certain glands in the alimentary tract, in fact, a specific fever? Is this supposition of the evolution, gradual or rapid according to circumstances, of a disease poison, dependent on *increased* conditions of pollution of soil, air, or water, either separately or all three together, unreasonable or illogical? Would it not, on the contrary, be more unreasonable to suppose that, under such conditions, there could be no evolution at all? These conditions of camp pollution undoubtedly exist, and tend to increase, in many instances; are they to have no effect? Is diarrhea to continue as simple diarrhea, or is evolution to come into action and produce a new disease? New, indeed, only because the causes necessary for its production are just now brought into operation—spontaneous only in the sense that water is of spontaneous origin when from hydrogen and oxygen the electric spark has produced water, where no water was before.

I believe that the results of our investigations controvert this theory conclusively. In the first place, we have been able to show that the specific poison of typhoid fever was introduced into every one of our national encampments, and with the disease as widespread as it is in this country, I believe that we have good reasons for the claim that one or more men already specifically infected with typhoid fever enlisted in nearly every command. There is, therefore, no necessity of resorting to the theory that the colon bacillus may be converted into the typhoid germ. Moreover, all the known facts of experimental bacteriology are at variance with this theory. So far as the supposition that simple diarrhea may develop into typhoid fever is concerned, I may state that in my opinion our investigations conclusively prove that this is not true. The history of typhoid fever in every encampment shows not only that this disease was not evolved from simple diarrhea, but that as a rule the men who had diarrhea did not subsequently develop typhoid fever. This subject will again be considered.

10. *Our investigations confirm the doctrine of the specific origin of typhoid fever.*

As has already been stated, we have been able to trace the introduction of typhoid fever into every one of our national encampments and into the majority of the regiments. In the case of the few commands about which there is some uncertainty as to the men bringing the typhoid infection from their homes, I may state that in all of these there was ample opportunity for the introduction of the specific poison from other commands.

11. *With typhoid fever as widely disseminated as it is in this country, the chances are that if a regiment of 1300 men should be assembled in any section and kept in a camp, the sanitary conditions of which were perfect, one or more cases of typhoid fever would develop.*

I have already stated my reasons for belief in the above given proposition. In such a camp, however, the disease would not become epidemic, and ultimately it should disappear altogether.

12. *Typhoid fever is disseminated by the transference of the excretions of an infected individual to the alimentary canals of others.*

It is more than probable that many individuals may for a while carry and eliminate the specific bacillus of typhoid fever without themselves developing the disease. Later, I will make some statements concerning the probable proportion of men who are immune to this disease. It is now a well-known fact that persons who have recovered from typhoid fever may for a long time continue to carry and excrete the specific poison. It has also been shown that the longevity of the typhoid bacillus, both inside and outside of the body, is much greater than is generally supposed.

13. *Typhoid fever is more likely to become epidemic in camps than in civil life because of the greater difficulty of disposing of the excretions from the human body.*

This proposition is so self-evident that it needs no lengthy argument to support it. The influence of the introduction of sewers into cities in decreasing sickness from this disease is well known to every student of sanitary science. Moreover, since the disease is disseminated by the transference of the excretions of an infected individual to the alimentary canals of others, it must follow that the more thoroughly and completely the excretions are removed from the vicinity of habitations the less will be the danger of infecting the inhabitants. In fact, the whole question of the prevention of typhoid fever in armies is largely one of the disposition of the excretions. Later I will give figures to show that the prevalence of typhoid fever in certain camps was in direct proportion to the thoroughness with which the excreta were removed from the vicinity of the camps.

14. *A man infected with typhoid fever may scatter the infection in every latrine of a regiment before the disease is recognized in himself.*

The elimination of typhoid bacilli from the bowels probably begins soon after infection. If this be true, during the entire period of incubation an individual may be a source of danger to others. Moreover, in most instances of typhoid fever the disease is not recognized during the prodromal stage, and during this time the excretions may be laden with typhoid bacilli. It must be evident from this that the only way in which typhoid epidemics can be with certainty prevented in armies is by the complete disinfection of the stools of all, both the sick and the well.

15. *Camp pollution was the greatest sanitary sin committed by the troops in 1898.*

In the history of the different regiments given in our report, we have had too frequent opportunity to call attention to the fearful pollution that existed in many camps. We have stated that fecal matter was deposited on the surface about the camps at Chickamauga and at other national encampments. Much of this filth must have been specifically infected with typhoid fever. Sinks were frequently overflowed by heavy rains, and their contents were distributed on the adjoining surface. I can not here dwell on this point, and must refer for particulars to regimental records given in our report.

16. *Some commands were unwisely located.*

While there is no evidence that any of the places selected for national encampments could be called unhealthful, it is true that some of them were not suited for camp sites. It was quite impossible to keep camps in a sanitary condition at the location for a while occupied by one brigade of the Fourth Army Corps near Port Tampa, Fla. On account of the nature of the ground and the surroundings, Palmetto Beach was certainly a very unsuitable location for a permanent camp. Every medical officer in the First Division of the Seventh Army Corps condemned Miami, and this condemnation was approved by officers of both staff and line, who visited this encampment. The men could not be made comfortable at this place. Notwithstanding these facts, there were regiments at Chickamauga that had more cases of typhoid fever than did any of those in the division at Miami, but this is no reason why the troops at the latter place should have been so uncomfortably situated. Some commands were unwisely located, for the simple reason that the soldiers could not be comfortably accommodated at the place selected. There was, however, a much more serious defect in the location of certain commands. Some regiments at Chickamauga, as we have shown in our report, were so located that they received the drainage of other regimental camps. There was certainly no sufficient excuse for this.

17. *In some instances the space allotted the regiments was inadequate.*

This was true of more than one command at Chickamauga. For instance, the One Hundred and Fifty-eighth Indiana was forced to contract its lines to half the regulation distance, and then it was only fifty feet distant from the Sixth Ohio. The sinks of the last-mentioned regiment and the kitchens of the First West Virginia were only twelve or fifteen feet apart. I am forced to conclude from this and numerous other similar examples that there were line officers in the First and Third Army Corps whose efficiency might have been enhanced by some knowledge of camp hygiene.

18. *Many commands were allowed to remain on one site too long.*

There were regiments at Chickamauga that did not move a tent from the time of arrival in May until that of departure late in August.

19. *Requests for change in location made by medical officers were not always granted.*

As an illustration, I will refer to the official records of the Fifth Pennsylvania. This command reached Chickamauga Park on May 20, and was unfortunately located on low ground. Requests for change in location were repeatedly sent in during June and July. The earth became muddy, the camp received the washings from other camps above, the sinks rapidly filled with water and overflowed, and yet requests for change in location were unheeded until August 12, when the regiment was allowed to occupy a new camp two miles to the west and on a higher piece of ground.

20. *Superior line officers can not be held altogether blameless for the unsanitary condition of the camps.*

As we have already seen, some of the regiments were improperly located from a sanitary standpoint. This was done by superior line officers, and sometimes in the face of protests from the medical officers. We have also seen that requests for change in location were disregarded and regiments were allowed to occupy one site for too long a time. In general, the camps became very filthy. It must therefore be admitted that line officers were to some extent responsible for the condition of the camps under their command. The medical officer can only recommend; the line officer may command. We think it unfortunate that no adequate instruction is given in hygiene in our national military school. It does seem that line officers should at least know enough of this subject to be able to recognize the importance of reasonable requests and recommendations made by medical officers.

21. *Greater authority should be given medical officers in matters relating to the hygiene of camps.*

It is of the greatest importance that more authority be granted medical officers in all matters pertaining to the hygiene of camps. Certain men in the medical corps should be selected to do the duties of sanitary inspector, and these should be chosen on account of recognized ability in this particular line. The sanitary inspector should make his reports in duplicate, one copy of which should be presented to the commander in charge of the troops, while the other should be forwarded to the surgeon-general. When the line officer in command fails to comply with requests made by a medical inspector, he should state in writing the reasons for non-compliance, or at least he should in writing acknowledge the receipt of the recommendation.

22. *It may be stated in a general way that the number of cases of typhoid fever in the different camps varied with the method of disposing of excretions.*

This is well illustrated by the methods of disposing of fecal matter and in the number of cases of typhoid fever in the three divisions of the Seventh Army Corps. The First Division was most uncomfortably located at Miami, Fla., from the last week in June until the second week in August. On the last-mentioned date it was removed to Jacksonville, where it joined the other divisions. During a part of its stay at Miami, and during the entire period of its encampment at Jacksonville, water-carriage was employed for this disposal of fecal matter. In the Second Division the tub system was employed. By this method infected fecal matter was scattered all through the camp. In the Third Division regulation pits were used. The number of cases of typhoid fever was smallest in the First Division, and greatest in the Second Division.

23. *The tub system of disposal of fecal matter as practiced in the Second Division of the Seventh Army Corps is to be condemned.*

Of all the methods for the disposal of fecal matter practiced in the national encampments in 1898, I regard this as the most unsatisfactory.

24. *The regulation pit system is not a satisfactory system of disposing of fecal matter in permanent camps.*

Eespecially is this true in hot weather. It is a very difficult thing to have soldiers appreciate the necessity of keeping fecal matter covered. As I have elsewhere stated, in many camps, orders were issued requiring each man to cover his stool as soon as deposited, but we did not inspect the pits of a regiment in which we did not find exposed fecal matter. Moreover, in the camps in 1898 flies swarmed so numerously that the first droppings of fecal matter were often covered with them before the act of defecation was completed. The pit system may be employed when armies are on the march, and stopping at one place for a few days at most, but even then they are sources of danger, and it is quite impossible to prevent the spread of typhoid fever in camps in which this method of disposing of fecal matter is employed. At Chickamauga it was well-nigh impossible to prepare sinks of proper dimensions, and still more difficult to keep the contents of these sinks properly covered. The clay thrown out in digging the pits hardened in the sun, and when thrown back on the contents had but little absorptive power, and the result was that fecal matter was constantly exposed. In some of the camps about Tampa it was impossible to dig sinks to proper depth on account of the height of the ground water. For these reasons, I am thoroughly convinced that if epidemics of typhoid fever are to be prevented, some other method of disposing of fecal matter in camps occupied for a week or longer must be resorted to.

25. *Our board has recommended that in permanent camps where water-carriage can not be secured, all fecal matter should be disinfected and then carted away from camp.*

For this purpose we have made a special recommendation that galvanized iron troughs containing milk of lime be used for the reception of all fecal matter, and that the contents of these be removed daily by means of the portable odorless excavator. I am aware of the fact that this method of disposing of fecal matter will be attended by increased cost, but I am confident that it will greatly lessen the number of cases of typhoid fever. These troughs, and the method of using them, have been fully described in our report. I believe that there is no question pertaining to army hygiene of greater importance than that relating to the method of disposing of fecal matter. The way in which this is done largely determines the number of cases of typhoid fever that will develop in any command.

26. *Infected water was not an important factor in the spread of typhoid fever in the national encampments in 1898.*

There probably were local water-supplies that became specifically infected with the typhoid-fever bacillus, but infected water was not the great factor in the causation of this disease. It is possible that the piped water at Chickamauga Park became specifically contaminated. Certainly the location of the intake pipe in Chickamauga Creek, so near the junction of that stream with Cave Spring Branch, which drained many of the camps, was not justifiable, and it hardly seems possible that the piped water wholly escaped contamination. However, that even at Chickamauga infected water was not the chief factor in the spread of typhoid fever is shown by the fact that regiments that did not drink this water also became widely infected with the disease, and it is furthermore demonstrated by the fact that the spread of typhoid fever continued after the regiments had been removed to Knoxville, Tenn., and Lexington, Ky., at both of which places the water-supply was above suspicion. It is also probable that some of the local water-supplies at Chickamauga became specifically contaminated. This might have been true of the wells from which the regiments of the Second Division of the First Army Corps for a while drew their supply. The location of the Jay's mill well, for instance, was such as to receive the drainage from typhoid fever infected camps near it, and it is not likely that this water escaped specific contamination. I am also inclined to attribute the greater prevalence of typhoid fever in the Third Army Corps to the fact that the sites covered by the regiments of this corps furnished many wet weather springs, which in all probability were specifically contaminated. That the water was not infected at Jacksonville seems to be beyond question. The supply came from artesian wells more than 1000 feet deep, and was distributed through the camps by means of pipes. In August and September of 1898, there were in round numbers at Jacksonville, 30,000 civilians or inhabitants of the city, and the same number of soldiers in camp near it. Both civilians and soldiers drank water from the same source. There were only a few sporadic cases of typhoid fever in the city at a time when each of the three division hospitals was receiving a score or more of patients with this disease each day. The same condition existed at Knoxville. Here the soldiers obtained their water-supply from the pipes that furnish West Knoxville. We satisfied ourselves, from an inspection of the health officer's records, that there were no cases of typhoid fever among the citizens, and at that time there were hundreds of cases among the soldiers. At Camp Alger, certain local water-supplies probably became contaminated, but there is no evidence that this was generally true. Each regiment obtained its supply from a bored well, and while there was some question about the wisdom of the location of a few of these, the majority were so situated and so constructed that infection seemed well-nigh impossible. The same was true of the water-supply at Camp Meade.

27. *Flies undoubtedly served as carriers of the infection.*

My reason for believing that flies were active in the dissemination of typhoid fever may be stated as follows: *a.* They swarmed over infected fecal matter in the pits and then visited and fed on the food prepared for the soldiers at the mess tents. In some instances where lime had recently been sprinkled over the contents of the pits, flies with their feet whitened with lime were seen walking over the food. *b.* Officers whose mess tents were protected by means of screens suffered proportionately less from typhoid fever than did those whose tents were not so protected. *c.* Typhoid fever gradually disappeared in the fall of 1898 with the approach of cold weather, and the consequent disabling of the fly.

It is possible for the fly to carry the typhoid bacillus in two ways. In the first place, fecal matter containing the typhoid germs may adhere to the fly and be mechanically transported. In the second place, it is possible that the typhoid bacillus may be carried in the digestive organs of the fly and may be deposited with its excrement.

28. *It is more than likely that men transported infected material on their persons or in their clothing, and thus disseminated the disease.*

In some of the commands it was customary to detail men from the line every morning to serve as orderlies at the hospital. These men went to the hospitals, handled bedpans used by persons sick with typhoid fever, and at night returned to their comrades. The most of them were wholly ignorant of the nature of infection and the methods of disinfection. In fact, at one of the division hospitals we saw orderlies of this kind go from the hospital and partake of their midday lunch without even washing their hands. These men handled not only the food which they ate, but passed articles to their neighbors. It seems to me that a more certain method for the dissemination of infectious disease could hardly have been invented. I have stated that in some of the camps the surface of the ground, especially where there were strips of woods, was frequently dotted with fecal deposits. At the time of our inspection of the Third United States Volunteer Cavalry at Chickamauga it was quite impossible to walk through the woods near this camp without soiling one's feet with fecal matter. Much of this was probably specifically infected, and it is by no means improbable that the infection was carried by the men into their tents, where blankets and tentage became infected.

29. *Personal contact was undoubtedly one of the means by which the infection was spread.*

The truth of this statement will be more evident after an inspection of the charts showing distribution of the disease in different regiments, which we have provided for our report. On making such an inspection one must be impressed with the fact so plainly evident that men who were closely associated developed typhoid fever simultaneously. Men in the same company came down with the disease on or about the same time. This became still more evident when we studied the cases with reference to the tents occupied by the men. Certain tents were badly infected, and the majority of all of their inmates developed the disease; while other tents wholly escaped. There are reasons for believing that this was an important factor in the spread of the disease. Blankets and tentage became soiled with typhoid discharges, and in this way the disease was carried by the command whereever it went.

30. *It is probable that the infection was disseminated to some extent through air in the form of dust.*

The shell roads through the encampment at Jacksonville were ground into the finest dust by the heavy army wagons. The scavenger carts carrying the tubs filled with fecal matter passed along these roads, and their course could often be traced by bits of feces falling from the tubs. Other vehicles ground up the fecal matter and dust together, and the winds disseminated these particles here and there. Men inhaled this dust; it was deposited on their food, and men ate the dust. Having seen these things, I am inclined to the opinion that infected dust was one of the factors in the dissemination of typhoid fever. I am aware of the fact that complete desiccation soon destroys the typhoid germ, but dust is not always completely desiccated.

31. *A command badly infected with typhoid fever does not lose the infection by simply changing location.*

I do not mean to say that it is not advantageous for a regiment badly infected with typhoid fever to change its location. On the other hand, in our history of the Second Division of the First Army Corps, we have shown that such change is of advantage and may be followed by a reduction in the number of cases; but mere change in location is not sufficient to stamp out the disease in a command after it has become widely disseminated. The histories of many regiments show this to be true. The Second Division of the First Army Corps became badly infected with typhoid fever at Chickamauga; later it moved to Knoxville, Tenn., at the latter place the location was an ideal one, the water-supply was above suspicion, the surface was gently rolling and natural drainage good. The soil was deep and pits of proper depth were easily constructed. Soil thrown out in digging pits dried in the sun and became highly absorptive, so that when thrown back on the fecal matter it readily took up the moisture. Notwithstanding all these favorable conditions typhoid fever continued, and instead of showing the slightest abatement increased in prevalence. The regiments that went from Chickamauga to Lexington, Ky., had a similar experience, although it was not so marked in these, probably because they had been more severely afflicted at Chickamauga and a larger proportion of the susceptible material had been used up. The regiments of the First Division of the First Army Corps that went to Porto Rico carried the infection along with them, with but little, if any, abatement. Numerous other equally striking illustrations might be given.

32. *When a command badly infected with typhoid fever changes its location, it carries the specific agents of the disease in the bodies of the men, in their clothing, bedding and tentage.*

This is shown by the fact that when commands changed location, leaving behind all their sick, and when they went to places free from the infection, the disease continued with them.

33. *After a command becomes badly infected with typhoid, change of location, together with thorough disinfection of clothing, bedding and tentage, is necessary.*

Even when disinfection is carried out as here suggested, the command will not altogether lose its typhoid infection, because some of the men will carry the germs of the disease in their bodies. Change of location removes the command from the infected locality; disinfection of clothing, bedding and tentage destroys the infected material deposited on these articles; but the germs that have already been introduced into the bodies of the men are not so easily reached. The utility of disinfection of clothing, bedding, and tentage was demonstrated by Colonel Girard, who carried out this procedure in some of the most seriously infected regiments at Camp Meade with gratifying results.

34. *Even an ocean voyage does not relieve an infected command of its infection.*

This is shown to be the case in the study of various commands that went to Cuba and Porto Rico. The regiments constituting the Fifth Army Corps that went from Tampa to Santiago in June were not widely infected before embarkation, and some of them were on board ship for sixteen days, and yet all developed one or more cases either on the way or soon after reaching Cuba. The regiments that went from Chickamauga to Porto Rico were widely infected before leaving this country and the disease continued after their landing with but little, if any, abatement.

35. *Except in case of most urgent military necessity one command should not be located on a site recently vacated by another.*

This principle holds good even when the vacating regiment is not known to have suffered from any infectious disease. This axiom in military hygiene was frequently violated during the summer of 1898. In many of the state encampments the regiments that responded to the second call were located on sites recently vacated by commands that had proceeded to the national encampments. This was true of the Fifteenth Minnesota, the Thirty-fifth Michigan, and the Two Hundred and Third New York, each of which, as we have already seen, developed a large number of cases of located on ground which had recently been vacated this disease. The Third Illinois at Chickamauga was by the Sixteenth United States Infantry. The regular regiment had occupied this site only eight days, and during this time had reported no sickness, but soon after it reached Tampa it developed 13 cases of acute intestinal catarrah, 3 of diarrhea, and 3 of typhoid fever. When the Second Brigade of the First Division of the First Army Corps reached Chickamauga Park, the site selected for the regimental camp of the Third Illinois occupied a part of that recently vacated by the Sixteenth United States Infantry, while the other regiments of this brigade were placed some distance away. This brigade remained at Chickamauga until July 22, during which time the Third Illinois developed 60 cases of typhoid fever, the Fourth Pennsylvania 26 cases, and the Fourth Ohio 19 cases. Additional instances of this kind have been given in our report.

36. *The fact that a command expects to change its location does not justify neglect of proper policing of the ground occupied.*

The filthy condition of some of the regimental camps at Chickamauga was explained on the ground that each regiment expected to be called to the front in a few days, and therefore neglected camp sanitation. A camp site should be thoroughly policed up to the moment of vacating it. This should be insisted on as a matter of military discipline, and camp commanders should regard proper attention to the sanitation of the sites occupied by their troops as one of their highest duties, and its neglect as a crime.

37. *It is desirable that the soldiers' beds should be raised from the ground.*

In some of the regiments at Camp Alger the tents were never floored. On inspecting these commands in August, we found dust several inches deep in the tents. During the day-time, in fair weather the blankets were taken out, and men, possibly with their feet soiled with infected material, walked around in this dust, and at night threw their blankets down on it and there slept. This was both unsanitary and uncleanly. We admired the enterprise of the men in some regiments who built in their tents a scaffold of poles, covered this with straw, and made their beds on this. I can not but think that sleeping in a dust pile, which is possibly infected with typhoid material, is not wise.

38. *In some of the encampments the tents were too much crowded.*

This was true both of the space allotted the tents and of the number of men occupying each tent. In some instances the tents of the same company were so close together as to leave no space between them, and those of two adjacent companies were crowded together back to back. Inasmuch as none of these commands were in the vicinity of any hostile camp, this overcrowding seems to have been wholly unnecessary. In some of the commands at Chickamauga the tents were not shifted, but stood continuously on the spot where they were pitched in May until the command left late in August.

39. *Medical officers should insist that soldiers remove their outer clothing at night when the exigencies of the situation permit.*

With from twelve to sixteen men in a tent, all sleeping in the clothes worn during the day and possibly with some of them soiled with infected fecal material, the effect on the general health certainly could not have been beneficial; and the possibility of the dissemination of the infection must be admitted. If privates in the ranks would give as much attention to personal cleanliness as officers do, and if they were furnished with quarters in which they could keep themselves clean, typhoid fever and other infectious diseases in armies would be greatly decreased. As I have already stated, our investigations show that tent infection must have been an important factor in the distribution of typhoid fever.

40. *Malaria was not a prevalent disease among the troops that remained in the United States.*

We have shown in our report that blood examinations for the plasmodium of malaria made by competent men at Chickamauga, Knoxville, Camp Meade, and Jacksonville, show that malaria was a rare disease among the troops that remained in the United States. This disease was undoubtedly more common in some of the camps than the blood examinations would indicate, because these were made for the most part on hospital patients and not on those who merely reported to the regimental surgeon, were given quinin, and were returned to duty in a day or two. The malaria that did exist in the national encampments in this country yielded readily to quinin, and the cases that did not yield to this treatment were not malaria.

41. *The continued fever that prevailed among the soldiers in this country in 1898 was typhoid fever.*

There is no evidence that any other continued fever was found among the troops that remained in the United States. One surgeon claims that dengue prevailed in his regiment at Chickamauga. I think it quite impossible for dengue to have prevailed in one regiment, while all other troops of two army corps encamped at the same place escaped this disease. It was claimed by some that the continued fever prevalent at Chickamauga differed from typhoid, and that it was a disease peculiar to the place; it was designated "Chickamauga fever." That the continued fever prevalent in our camps in 1898 was typhoid fever is demonstrated by the following facts: *a.* When the temperature-curve was not vitiated by the use of antipyretics, it was that of typical typhoid fever. *b.* The fever was not broken or arrested by the administration of quinin. *c.* The death-rate was that of typhoid fever. *d.* Whenever a post-mortem examination was made, and the total of these was considerable, the characteristic lesions of typhoid fever were found.

42. *While our investigations show that coincident infection with malaria and typhoid fever may occur, the resulting complex of symptoms does not seem to be sufficiently well defined and uniform to be recognized as a separate disease.*

In our report we have devoted a special chapter to this subject, and I will be compelled to refer those desiring detailed information to this.

43. *About one-fifth of the soldiers in the national encampments in the U. S. in 1898 developed typhoid fever.*

Among 44,803 officers and men in regiments of the First and Third Army Corps, the records of which we have carefully studied, the number of cases of typhoid fever according to our estimate was 9660. This is equivalent to 21.56 per cent. In the Fourth Army Corps the percentage seems to have been somewhat less. However, the records of some of the regiments of this corps were not well kept, and we can not be so positive concerning the number of cases.

44. *Army surgeons correctly diagnosed a little less than half the cases of typhoid fever.*

The total number of probable cases of typhoid fever among the regiments studied in Chickamauga was 9660. Of these 4068 were diagnosed typhoid fever either by regimental or hospital surgeons. Most of the cases improperly diagnosed were sent to general military hospitals, or to civil hospitals with the diagnosis, "malaria." In 80 out of 85 cases sent from the Fifth Maryland to civil hospitals in Baltimore, the diagnosis was changed from malaria to typhoid fever. Of 98 cases sent from the Eighth New York to hospitals in New York City, all were recognized as typhoid fever by the physicians in the hospitals, while the majority of these had been entered on sick reports under other diagnoses. The failure of regimental surgeons to properly diagnose many cases of typhoid fever is easily explained. Orders required, very properly, that every man sick for forty-eight hours should be sent to the division hospital. It will be seen from this that the cases were not under the observation of the regimental surgeon for a sufficient time for him to make a diagnosis. There is also some excuse for the failure of the surgeons at the division hospitals to recognize all the cases of typhoid fever. Many of the less severe of these cases remained in hospitals for a short time, and were furloughed home, or forwarded to some general hospital. Moreover, we have shown in the body of our report that, in recognizing nearly one-half the cases of typhoid fever, the army surgeon probably did better than the average physician throughout the country does in his private practice.

45. *The percentage of deaths among cases of typhoid fever was about 7.5.*

Of the 9660 cases already mentioned as occurring among certain troops at Chickamauga, 713 died. This gives a death-rate of 7.38 per cent. This corresponds closely with the death-rate for typhoid fever in those places in which most accurate records have been kept. In the city of Hamburg, during the years 1886-87, there were 10,823 cases with a death-rate of 8.5 per cent. Brandt has collected 19,017 cases treated by cold baths with a mortality of 7.8 per cent. Of 2293 cases treated in some of the larger hospitals in this country in 1897, 9.24 per cent. died. Further details concerning the mortality in typhoid fever are given in our report.

46. *When a command is thoroughly saturated with typhoid it is probable that from one-third to one-quarter of the men will be found susceptible to the disease.*

I am inclined to believe, but desire to state it as an opinion, that typhoid fever disappeared in some of the regiments only after all the susceptible material had been exhausted. This was probably true in all regiments which had 400 or more cases.

47. *In military practice typhoid fever is often apparently an intermittent disease.*

This fact is shown especially in the study of the Eighth New York. Please bear in mind that I state that typhoid fever is apparently an intermittent disease. I do not mean that the apparent intermissions are afebrile; I only mean that the men sick with this disease had periods of improvement which were so marked that regimental surgeons often returned the men to duty, probably at the request of the men themselves. We have discussed this very fully in our history of the Eighth New York.

48. *The belief that errors in diet with consequent gastric and intestinal catarrh induced typhoid fever is not supported by our investigations.*

This belief, which was formerly held by many, is founded on false conclusions arising from erroneous conceptions of the etiology of the disease. Moreover, the early symptoms of typhoid fever are often confounded with those of simple gastrointestinal catarrh.

49. *The belief that simple gastrointestinal disturbances predispose to typhoid fever is not supported by our investigations.*

The members of our board began their investigations with the belief, which seems to be quite generally held, that acute diseases of the gastrointestinal tract render the individual more susceptible to subsequent infection with typhoid fever. However, our studies have forced us to come to the following conclusions concerning the relation between typhoid fever and preceding temporary disorders, including those diagnosed as diarrhea, enteritis, gastroenteritis, gastroduodenitis, intestinal catarrh, gastrointestinal catarrh, gastric fever, and simple indigestion: *a.* The temporary gastrointestinal disturbances of May and June had but little if any effect on subsequent infection with typhoid fever. *b.* The temporary gastrointestinal disturbances of July and August, instead of predisposing to typhoid fever, gave a certain degree of immunity against subsequent infection with this disease. In our report we have attempted to give an explanation of this.

50. *More than 80 per cent. of the men who developed typhoid fever had no preceding intestinal disorder.*

In 2763 cases in which this point was especially investigated, 2356 were not preceded by any intestinal disorder.

51. *The deaths from typhoid fever were more than 80 per cent. of the total deaths.*

The percentage of deaths of typhoid fever to total deaths is not so high if we accept the diagnoses given in the official reports.

52. *The shortest period of incubation in typhoid fever is probably something under eight days.*

This statement is founded on data obtained by a study of typhoid fever among the hospital corps, men and women nurses at Chickamauga. The details are given in our report.

53. *One who has lived in a camp in which typhoid fever is prevalent is liable to develop this disease any time within eight weeks after leaving such a camp.*

The particulars bearing on this statement are given in our history of the Fifth Pennsylvania.

# SECTION ON PRACTICE OF MEDICINE.

## ADDRESS OF THE CHAIRMAN.*

BY GEORGE DOCK, M.D.

ANN ARBOR, MICH.

We meet again for the consideration of a well-filled program. The number of papers is considerably less than last year, but is still so large that, allowing for the usual proportion of authors unavoidably prevented from appearing, our time must be economically used in order to get through. An effort has been made to group papers on allied topics so that the discussion may be directed to the series, and repetition avoided in that way. In most cases the topics for the groups were arranged by the officers of the Section. Other set discussions on chosen topics were projected, but for various reasons could not be carried out as planned. The officers of the Section take not a little pride in the large number of abstracts and synopses published in the program. The utility of these in preparing members of the Section for the best appreciation of papers, and in bringing out pertinent comments and criticisms, seems obvious. For the benefit of future progress, attention may be called to the advantage of making the abstracts as short as possible. This can be done better by the author than by the Section officers or the editor of The Journal. It would seem that about 100 words should be the limit.

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The number of papers on our program leads to the question whether it is not advisable to form a new Section, in order to take up part of the work, and interest will naturally be directed to the unofficial Section on Pathology, of whose existence you already know. There are a number of thoughts that may be expressed in this connection. In general, it seems better to have as few sections as possible in an association made up, as this one is, largely of general practitioners. Yet such is the amount of material that specialization is certain to press its claims in various directions. So far as the proposed new one is concerned, there is a doubt in the minds of some as to the scope intended, due to the various meanings given the term "pathology" and also to the activity of the Section officers. If we take away from the existing Sections on special pathology and therapeutics all their papers devoted to pathologic topics, and place these in a group by themselves, we emasculate the former. Perhaps there is no greater need, not only in medicine, but also in surgery, gynecology and various other branches, than the constant repetition of the principles of pathology, the assertion of the anatomic, physiologic and chemical basis of diseases and the cultivation of positive standpoints in these branches. For the specialist in pathology, such a section might doubtless be a source of much interest, but even he might gain something by annual contact with the clinical workers in hospital and general practice, that he would not find in a special section.

On the other hand, a section devoted to experimental pathology might be useful, still more so one in which general pathologic problems might be considered and where, in addition, specimens might be exhibited, methods demonstrated and apparatus shown. So far as the exhibition of anatomic specimens is concerned, it seems to the speaker that these should be selected with special reference to their importance in pathology or to the method of preparation or preservation. With energetic Section officers, such as were wisely selected for this year, the results would be of great value. It might also be useful to limit the source of such specimens each year to the section of country in which the meeting is held. In this way not only would the labor, expense and risk of distant transportation be avoided, but a general cultivation of anatomic work excited, and, combined with a practical exhibition of apparatus, a more rapid diffusion of methods of all kinds set up.

The chairman of a Section in the year completing a century shoud be pardoned if he falls into the mood natural to such an epoch. At the end of this century, nothing could be more agreeable than to recount the great discoveries that have made it, in medicine, more interesting than any that have gone before. But all these things have been told and retold by more eloquent tongues, and there is another operation that is often more useful though not so pleasant—the examination of the past with a view to facing the future with more certain glance. Socrates held that an unexamined life was not worth living. The same thought might be applied to a profession, and although I would not give the impression that, like Socrates, I have a divine command to examine medicine, the chair in which your favor has placed me may be held responsible for any seeming impiety on my part for attempting it.

Not long ago, in talking with a master of one of its most successful technical subdivisions, my friend remarked that medicine was becoming daily more easy. Against the word "easy" I had to protest, though realizing what was meant. So far from growing easier, the art as well as the science of medicine grows daily more difficult. It is more certain, more thorough, more far-seeing and more far-reaching than ever before, but it requires of its votaries more knowledge, more technical dexterity, greater expenditure of time and greater lucidity of judgment than ever before. We have only to point to any one of the commonest diseases to make this clear. Take a case of typhoid or malarial fever, or of pulmonary tuberculosis, and consider the numerous things to be done and to be thought about that twenty years ago were as far from our minds as was Aristotle's treatise on the constitution of Athens.

It is an interesting and to some a discouraging fact that, although medicine has made most remarkable improvements in this century, its influence over the layman seems less than before and waning rapidly. While it is becoming more positive, more candid, more accurate, the grossest delusions flourish. Not only the plausible nostrum-maker, but the palmist, the astrologer and the ridiculous therapeutic claims of a dozen half-crazed brains have their believers by the thousand. Not many years ago a favorite theme of semiscientific poets was the prediction of a rapidly approaching golden age, when the physician, trained in biologic laws, should occupy the place once held by priests and augurs, but wield his authority only for good ends. Failure in the consummation of this ideal need not make us despair of human nature. In a time of rapid advance it must happen that great differences exist between the trained and the untrained. Moreover, this is an age with little respect for authority. Not only now as before, *irrt der Mensch so lang er strebt,* but it is perhaps well for medicine that people no longer look on its real proficients with the faith of the savage in his medicine-man. Healthy skepticism can do us no harm, and we must remember that with all our advances we still have about us some relics of medievalism. The subject, however, is rather one for the psychologist than the physician, and at this time may be passed over for the consideration of one that affects us more directly, and we may venture to raise the question whether we have used to the best advantage the talents given us by this century, and whether we are likely to be prepared as well as possible for the revelations of the next. A few examples may be considered.

In the first decade of our century Corvisart again gave to the world what the preceding century had rejected. His translation of Auenbrugger's invention of percussion, enriched by his own brilliant commentaries, was soon enlarged and controlled by master minds in every country. For half a century this has been a method of undisputed value in the determination of the existence and extent of a large number of important diseases. In the second decade Laennec opened up a new world with the stethoscope. This has been explored by all the great physicians of the last seventy-five years, in the face of argument and ridicule, and, with percussion, has helped to call attention to the value of inspection and other so-called physical methods of diagnosis, but how often do we see them all entirely neglected or carelessly used. Not only is the routine examination of the body frequently left undone, but even with marked symptoms on the part of the various organs accessible by these methods, either no examination is made, or it is made in a manner that would be ludicrous if the results were not often most serious. A striking example of neglect of physical examination recently came to my notice. One of my assistants found that a man who consulted him had a complete transposition of the viscera. The manipulations excited the patient's interest, and when he was told the state of affairs said he had been examined seven times for life insurance and been treated once for pleurisy, in a large city hospital, without having the condition discovered. In the third decade Bright showed the relation of albuminuria to kidney disease, and in the fifth Henle and others made clear the diagnostic importance of tube-casts. Though the actual value of these two discoveries has often been exaggerated, they are still essential in diagnosis, but how often are they neglected. Perhaps few fail to make use of tests for albumin in cases in which certain diseases are suspected, yet, as a routine measure, they are often omitted. As to casts and also other substances in the urine, such as blood, pus, and pathogenic bacteria, many physicians are as if these things had never been.

It is not difficult to explain the reasons for this state of affairs. One is indolence, but the most important is that the methods have not been acquired at the medical school; perhaps some of them have not even been seen by the helpless student. Even if the methods have been learned, the student often has not the fundamental knowledge that diagnosis means more than the naming of a disease. Satisfied if he recognizes, even vaguely, one clinical picture in a sick man, he fails to retain or acquire a mastery of diagnostic measures. The condition depends in turn partly on the absurdly large number of medical schools in the country. With from six to seven score of these the obtaining of students must be a more important matter than their training. One of the most certain hopes of the new century is that, comparatively early, many of the superfluous schools will become extinct. Along with concentration of labor in the schools and improvement in the previous preparation of students, we can confidently expect a notable change for the better in methods of teaching, for there has probably never been a time when teachers of medicine, as well as undergraduate students, were so critical in regard to methods as now.

Another topic worthy of examination is that relating to the more instrumental part of diagnosis—a thing that has within a short time assumed important proportions, but the various relations of which are often neglected. It is here especially that apparent ease tempts to superficial examination of the sick.

The many manipulations included under the general head of laboratory examinations vary so much in difficulty, in certainty and in weight as evidence that it is only natural that mistakes occur, yet these are so vital that those concerned should be constantly on the alert to guard against them. How difficult it is to measure the importance of each laboratory fact in itself is often illustrated in practice. I have known of a surgeon being told that in a certain case an enlarged spleen was part of a leukemic process, and with the remark that he believed "clinical observation more trustworthy than instrumental diagnosis," he proceeded to open the abdomen. Another time the report on a sputum examination for tubercle bacilli is negative, but now, instead of relying on the clinical examination, too often sufficient, the patient is allowed to go on as if the negative examination had the same value in one case as a positive one in another. How often is it forgotten that laboratory methods must be learned as separately as any other specialty. No one would think that ability to feel alterations in the pelvic organs gives facility in the interpretation of ophthalmoscopic pictures, yet how often is it taken for granted that one who can cultivate tubercle bacilli can, without practice, detect malarial parasites, or that one who can see tube-casts can also be infallible in the microscopic distinction of primary and secondary anemias.

No doubt the unprepared but ambitious laboratory expert is partly responsible for the present state of affairs, but it would seem that the physician who calls on such an expert should select him with as much thought as he would an operating specialist. Often, too, the physician could control the work of the expert, either by asking for the proof or an explanation of the steps followed. Some time ago a bottle of specimens came to me after making the rounds of half a dozen microscopists. All the previous examiners asserted that the specimens were animal parasites, and their appearance to the naked eye—small, black, thread-like bodies, as they were—made this seem probable. A glance was enough to show that in fact they were the well-known vegetable spirals, the cause of error to so many microscopists in the last fifty years. Some comparisons made it practically certain that the tissue came from bananas. Yet this discovery, so easy to control, was ignored by those in charge. By a curious coincidence the patient herself came under my observation many months later, and on hearing my statement about the specimens, admitted an excessive consumption of bananas, the cause of so much trouble.

When the position and limitations of the laboratory worker are more clearly understood, his remuneration will be better regulated than now. In many places he will be part of a hospital staff, in a laboratory equipped for all kinds of work. In others he will have his private laboratory, and in still others, where the field is not so large, he will have the less brilliant, but not less useful and perhaps more interesting position of assistant to a busy practitioner of broad views.

An examination of the status of another great division of our art, that of therapeutics, is also well worth while in the last days of the century. In materia medica, this century, especially in the latter part, has been prodigal if not discerning. The extraordinary activity in the production of new drugs, though it may give us some that far outrank poppy and mandragora, also makes more difficult the judgment so essential to rational practice. So confused are our standards that it is often impossible to distinguish the wares of the professor of chemistry or pharmacology from those of the modern seekers after the philosoper's stone. In addition to the products of synthetic chemistry we have a new field in the long-unused animal kingdom. Here constant examination is necessary. It is not easy for the busy man to see how the so-called lymph of an alleged goat should not be as potent as thyroid extract. Serum, too, is a word that suggests potentialities of many kinds, though so widely applied that Virchow's jocular definition—"Serum is any fluid that is not precisely urine"—seems peculiarly apt. One hopes that the end is near when discoverers are driven to such names as "hydrogogin" and "anusol," but the possibilities of the prefiex "eu" temper the hope considerably.

No doubt the commercialism of the day is partly responsible for the present state of this branch of medicine, but the medical profession has a heavy load of guilt. I am credibly informed that in a large factory of preparations used only by the profession, thirty clerks are kept busy answering letters from doctors in regard to the treatment of particular cases in practice. These clerks make no pretense to a knowledge of medicine, or even of drugs. They have their trade catalogue, from which they readily secure the desired information. But will this tendency stop with therapeutic problems? Will not diagnostic and pathologic questions also be given the manufacturing pharmacist for solution, and will he be so blind to his own interest as to remain silent? We can gather some idea of this in some recent literature on the important subject of vaccination, a subject strangely neglected in medical schools and scientific laboratories. In this we learn of *vaccinia sine eruptione* as a satisfactory explanation of what would strike a critical observer as a complete failure of the virus. No wonder that "a boy living in the infected district," who performs the operation, is put forth as a witness concerning a matter of which Jenner himself might not be competent to judge.

Therapeutic false prophets will last long into the twentieth century, but the examined, criticised life then, as ever since the days of Hippocrates, will be but little influenced by them. To it, "they come like water and like wind they go."

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# IMPROVED METHODS AND DETAILS IN THE CARE OF PATIENTS DURING SURGICAL OPERATIONS.

BY FENTON B. TURCK, M.D.
CHICAGO.

Surgery has reached so high a state of perfection in technique, in toilet and in the care of the patient before and during operation, that there would seem to be nothing left for improvement. Notwithstanding our apparently perfect precautions, however, the surgeon occasionally loses cases through septic infection, shock or other causes.

In the case of septic infection, the surgeon is bewildered in the attempt to determine the source of infection. "The operation is successful but the patient dies," sometimes as the result of infection, sometimes from shock, oftentimes from both. The object of this preliminary report is to present a few facts that may indicate some of the subtle causes of infection and shock occurring, though all the usual precautions have been taken. In operating on the abdomen, the skin is found to be a source of infection. Welch and others have clearly shown that bacteria are still found in the skin, even after all the usual preparations have been made. I have made a number of cultures from the skin before and after operations by various surgeons, as well as in cases of my own. The method was to take cultures from the operative area after the usual aseptic preparations of the skin had been made. After the incision cultures were made from the wound and from the peritoneal cavity. The operation completed, cultures were made from the superficial area, the skin, the deeper connective-tissue layer, the peritoneal cavity and the laparotomy sheets and towels. The result of the bacteriologic investigation was positive in each case and confirmed the observations made by others. The detailed results of my bacteriologic work are reserved for a more complete report.

The laparotomy sheets and towels, as they become wet, are capable of transmitting infection from the field to the edge of the wound and peritoneal cavity. The indications are, therefore: 1, to prevent, as far as possible, infection from the skin and contact with the skin, with the hands, instruments, sponges, etc.; 2, to protect the skin from becoming contaminated by pus or visceral contents. To meet these indications I have devised an improved laparotomy sheet made from thin rubber dam which is fitted close to the body and is illustrated by the accompanying cut (Fig. 1).

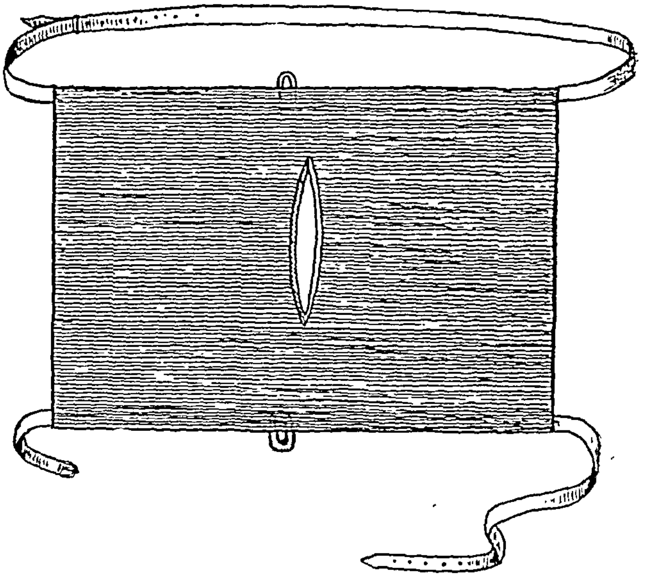


FIGURE 1.

The advantages of this rubber protective are that it not only lessens the danger of infection from the skin, but prevents the latter from becoming contaminated. It also prevents the loss of heat by evaporation from the exposed area of the body, thus lessening danger of shock. The use of the protective does not prohibit the additional use of the linen laparotomy sheet. The former is so arranged as to fit closely and does not interfere with the field of operation.

Some surgeons consider it necessary to protect the edges of the wound by suturing the peritoneum to the skin. This requires considerable time, and as the stitches are usually placed at some distance from each other, the edges are not entirely protected. If the rubber sheet be folded and under the edges of the wound, it may be clamped and held in position after the removal of the hemostatic forceps; the clamps act at the same time as self-retaining retractors, which may be used at any moment. This is shown in Figs. 3 and 3*a*.

Having presented methods for protecting the viscera from infection by the skin, the next important consideration is the protection of the abdominal cavity and the edges of the wound from any possible danger of infection that may arise from opening the viscera, as in operations for gastroenterostomy, enteroanastomosis, cholecystotomy, etc. When a pus cavity exists in the abdomen it is often impossible to avoid peritoneal infection. As an illustration of the method for preventing this infection, the operation of gastroenterostomy may be taken.

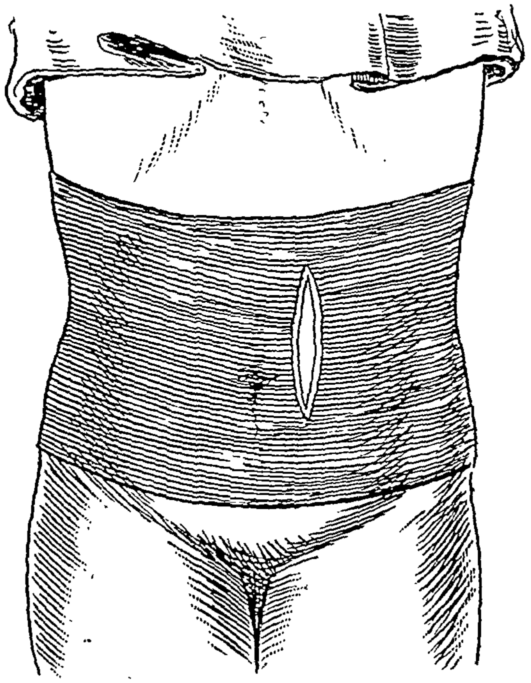


Figure 2.

A square sheet of rubber dam is made with two small openings which are reinforced by a rubber band forming a collar, as shown in Fig. 4. The openings are about three to six inches apart. The protector or shield is laid over the abdominal wound, and the portion of the stomach to be incised is drawn through one of these small openings, which stretches and hugs closely the protruding viscus. The loop of intestines selected for the anastomosis is drawn through the other opening. As the shield or protector entirely overlaps the edges of the wound, the two portions, stomach and intestines, are entirely excluded from the peritoneal cavity. When the viscera are opened for the anastomosis, the contents can not possibly gain access to the cavity, or come in contact with the rest of the viscera. This is well shown in Fig. 5.

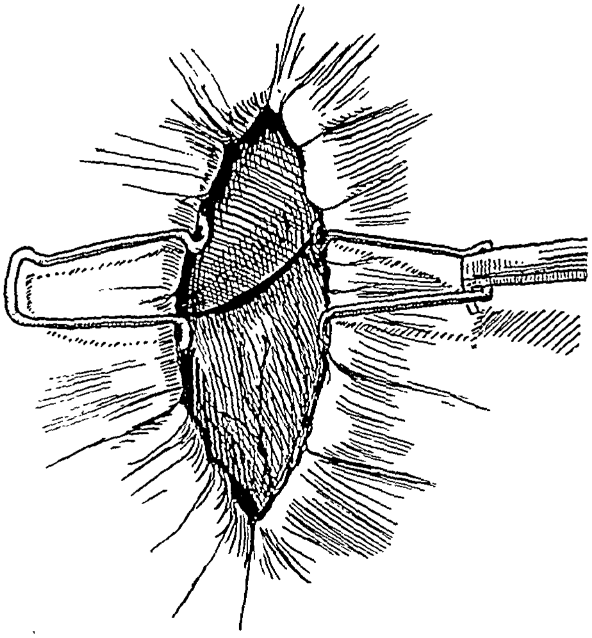


Figure 3.

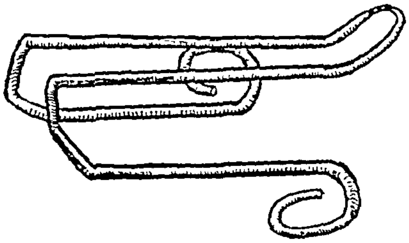


Fig 3a.—The self-retaining retractor and clamp.

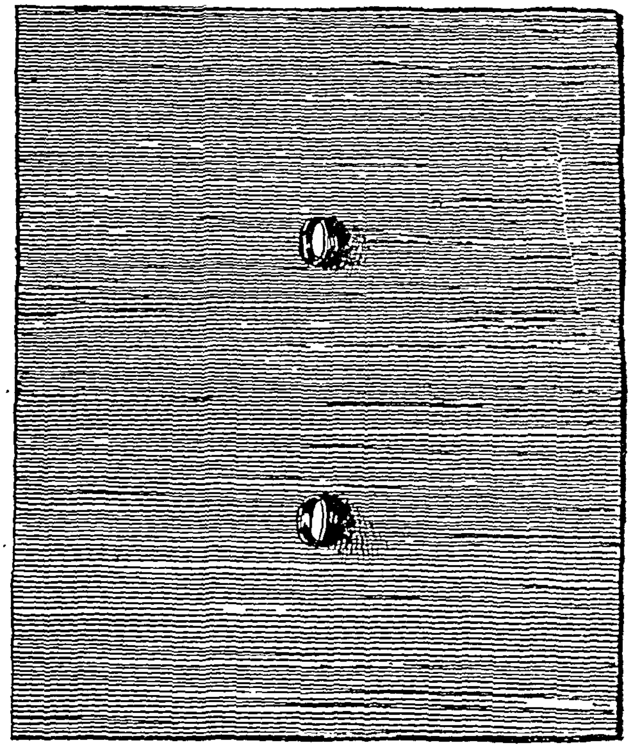


Figure 4.

The constriction band around the viscera not only prevents the gastric or intestinal contents from contaminating the wound, but also prevents any considerable escape of the contents. Acting like clamps, but without undue pressure, it at the same time prevents [illegible] rrha

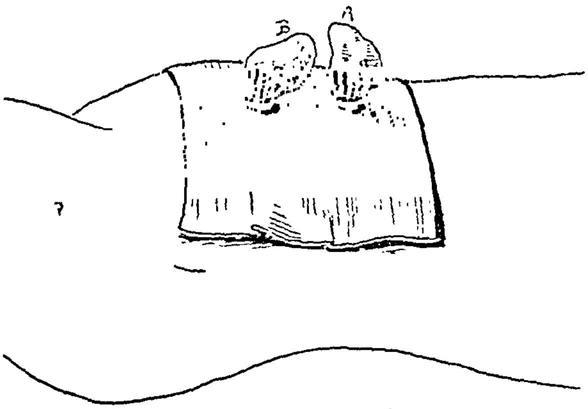


Fig 5.—A, stomach: B, loop of intestine.

—a very important point in operating on the stomach. The completion of the anastomosis is shown in Fig. 6.

The operation completed, the entire shield is slit open with scissors, the viscera set free, and replaced in the abdominal cavity. The principle involved in other operations, such as end-to-end anastomosis, is the same. In cholecystotomy, or any operation of like nature, a shield with one opening only is used. In all the various operations where this method is serviceable, gauze may be used in addition to the shield. When gauze is used alone in the cavity there is great risk of infecting the viscus, whereas by this method the rubber dam can be kept perfectly clean, at the same time absolutely "walling" off, and excluding the operative area from the rest of the field. Where this special field or protector is not available[1] one may be improvised by using a new rubber dam of medium thickness. A small round hole is punctured at the points desired, and the viscera drawn through as described above.

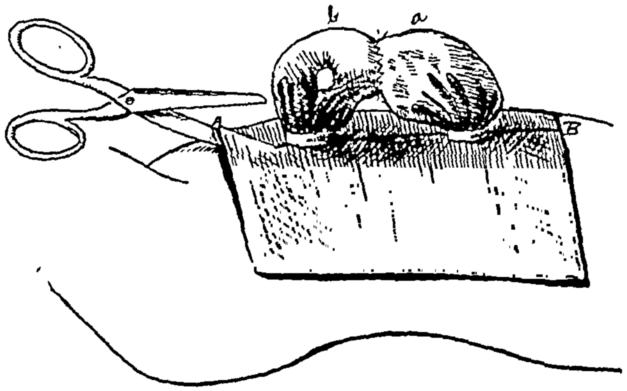


Figure 6.

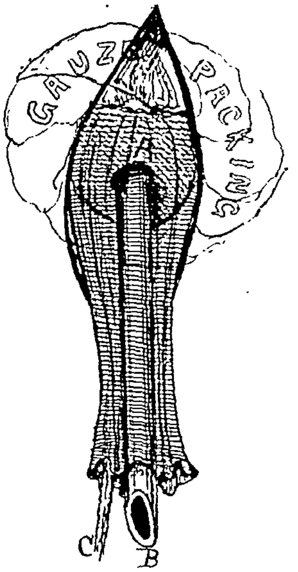
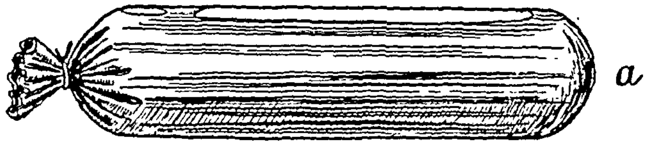


Figure 7.

The advantages claimed are: 1. Absolute shutting off of the abdominal cavity from the danger of infection; from the escape of visceral contents and pus; and from any outside influence. 2. Preventing the escape of the visceral contents. 3. Preventing or checking hemorrhage. 4. Protection of the viscera from trauma in handling. As the rubber-covered viscera are grasped and not the viscera directly there is less danger of injury. Furthermore, as the viscera are held in position by this simple method, much tugging and pulling in holding them in the wound is avoided. This is a decided advantage in preventing shock. 5. As the viscera are covered in with rubber, there is no evaporation—no desiccation or loss of heat—which is another important factor in the prevention of shock.

Another valuable protective device, though not so serviceable as the foregoing, is that which I have named the rubber drainage coffer-dam. It consists of a thin rubber cylinder and is used as a protection against leakage. Around the drainage-tube at the point of insertion—as for example in cholecystotomy where drainage of the gall-bladder is desired—the thin flexible cylinder is stretched around the neck of the gall-bladder, and fits snugly to the outer wall, but not with sufficient pressure to shut off circulation. A few stitches hold it in place. The drainage-tube is then inserted within the rubber cylinder and stitched into the gall-bladder in the usual manner. Between the inner drainage-tube and the rubber coffer-dam, a few strands of the suture material are placed for drainage. The folds of the thin wall of the cylinder act also as capillary drainage-tubes. By means of the rubber coffer-dam, we are enabled to more completely shut out the peritoneal cavity. Gauze may now be packed around this coffer-dam in the usual way. This device with some of the various modifications and sizes of thin cylinders may be used in other operations and is shown in Fig. 7.



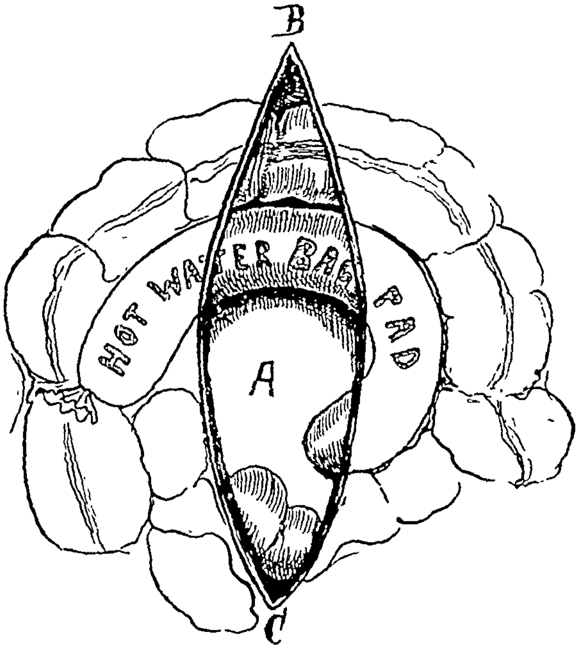


Figure 8.

In abdominal operations, when we have used every precaution against infection, we still have another threatening factor—shock.

In operating on the upper abdominal area, in liver, stomach, or intestinal operations, this factor of shock is a constant menace to the life of the patient, and a great source of anxiety to the surgeon, however perfect his technique may be. In the above described methods I have called attention to the manner of preventing injuries in handling the viscera and methods of preventing desiccation of exposed viscera and loss of heat. The application of heat to the viscera is for the purpose of stimulation and it is usual to apply hot sponges for this purpose. The heat in the wet sponge is soon dissipated and instead of supplying heat the sponge abstracts it from the viscera and surrounding tissues. The sponge can not be changed frequently enough to keep up the temperature. To avoid this, I have placed within a gauze pad a small, thin, rubber, hot-water bag.[2] These are made in different shapes and sizes, adapted for various uses, as shown in Figs. 8*a* and 8*b*.

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[1] Made for me by Miller Rubber Mfg. Co., Akron, Ohio, and sold by dealers.

In some cases the gauze is not needed for absorptive purposes, but simply for holding back the viscera. The hot-water bag alone may then be inserted into the abdominal cavity and a ring may be formed such as shown in Fig 8*b*, and surrounding this a plain gauze sponge may be placed. This acts as a coffer-dam for the operative field.

The rubber bags to be placed within the abdominal cavity may be rendered absolutely sterile, then partially filled with sterile water and heated in the receptacle or bath to the desired temperature. The degree of temperature which I have found most useful is about 48 C.—118.4 F. A thermometer placed in the water-bath regulates the temperature of the sponge pads and bags. (See Fig. 9.)

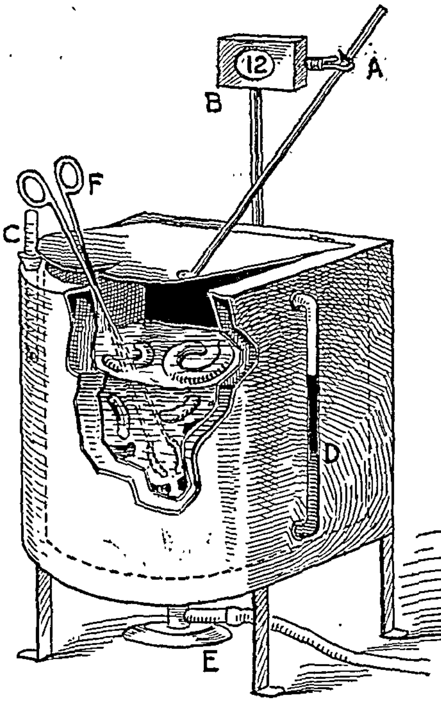

FIG. 9.—A, rod connected with coverlid; B, register; C, thermometer; D, water gauge; E, burner; F, forceps.

There must be a distinction made between measures used in the prevention of shock, where this is imminent, and those used where profound shock is present. In all measures for preventing shock the application of heat is one of our most valuable agents.

In previous contributions on this subject[3] I have shown that splanchnic congestion in shock is most readily reduced by the application of heat to the splanchnic area. The methods of application are already quite well recognized, such as the use of intragastric hot-water bags, and those placed within the abdominal cavity. The value of the heat obtained from hot water introduced into the abdominal cavity is well known, also that it is necessary to maintain heat. But there are many objections to water placed directly within the abdominal cavity. The danger of spreading infection is especially important, and it has been claimed that some of the evil results are due to "flooding" the endothelial layers of the peritoneum. With the hot-water rubber pads we possess all the advantages of heat stimulation to prevent shock and none of the above disadvantages. To keep these rubber abdominal pads or sponges at the desired temperature, a receptacle is used containing water and surrounded by a water-jacket. This also keeps count of the sponges used. (See Fig. 9.) Each time the lid is raised it is connected with a small apparatus which rings a bell and registers one, two, and so on. By this automatic registering of the number of sponges taken from the receptacle a perfect check is kept.

The advantages of the hot rubber sponge pads are:

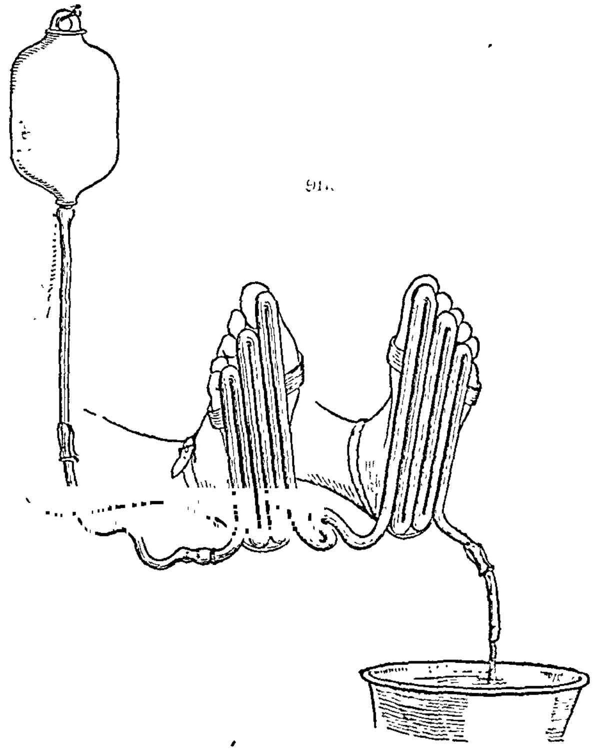

FIGURE 10.

1. The continuous application of heat at the required temperature. 2. These hot-water rubber abdominal pads or bags are soft and yielding like a water-bed. 3. They can be changed at will and can be removed through a small opening. 4. At the end of the operation, before closing the abdominal cavity, a hot-water rubber pad is placed in the cavity under the line of the closure. A small gauze pad is placed over this to catch any blood discharge. This bulges the walls upward sufficiently for the more accurate closing of the abdominal wound. In removal the pad is partially pulled out through the small opening at the end of the wound; the water enters the extracted portion, and the bag is easily withdrawn, far more easily than gauze can be dragged out.

Another method for the prevention of shock is the *stimulation of the soles of the feet.* The plantar reflexes are already well recognized; the vasomotor effects are not so well understood by the general p. Sti ulation of the terminal nerves results in more prompt and effectual action than when stimulation is applied to the nerve trunk. In experiments on dogs I have observed that heat stimulation applied to the soles of the hind feet produces a marked effect on the splanchnic circulation. When hot water is applied at the temperature of 50 C. it causes a marked contraction of the splanchnic vessels with a rise in blood-pressure. When moderate shock is produced in the dog it is possible to lessen it by the application of heat to the soles of the hind feet. When profound shock is established it requires more active measures, such as the introduction into the stomach of the hot-water bag at a temperature of 55 C.

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[2] Journal of American Medical Association, June 11, 1896; Turck: Surgical Shock, ibid., June 19, 1897.

[3] Proc. Am. Gastro-Ent. Ass'n., 1900. Turck: The Splanchnic Circulation and Its Relation to the Stomach and Intestines.

In order to provide a practical and effectual means of applying heat at a constant temperature, to the soles of the feet during surgical operations, I have had made the hot-water-coil slippers shown in Fig. 10. These slippers have been of valuable service in the prevention of shock in my own experience. I now recommend them to surgeons in all abdominal operations. Even when shock is not imminent the use of heat applied to the soles of the feet is valuable. A good effect is produced on the circulation and better elimination is established.

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# NEURASTHENIA AND THE REST CURE.

BY FREDERICK A. McGREW, M.D.
DAVIS, ILL.

The use of the rest cure as a method of treatment is rapidly increasing. "Retreats," "rest-homes," etc., are springing up in the neighborhood of cities in numbers almost rivaling the hospitals. In growing numbers patients with nervous complaints present themselves with a history of having "already taken the rest cure." Some of these have done so under professional advisement; others at their own discretion, or at the solicitation of friends. Some have been benefited, for without doubt it is a valuable resource in certain neurasthenic states. Some have escaped with no unpleasant effect other than an irksome sequestration; while others have returned with either a waning confidence in the judgment of their physicians, or a firmly fixed belief that their ailments are beyond the comprehension and reach of ordinary medical skill.

Considering the ill-defined scope of the term "neurasthenia," and the inexactness with which text-book and journal writers prescribe the rest cure for its treatment, it is not surprising that there should be many "cut-and-dried" rest-cure methods. Unless we desire this useful measure to come into disrepute, there must be a more definite knowledge of its proper use and limitations. And this means, first of all, the substitution of a working scientific basis in place of the prevailing haphazard fashion of disposing of troublesome neurasthenia patients.

From my observation of these cases in private practice, and during a service on the resident staff of the Alma Sanitarium, where the study of neurasthenia and its treatment is simplified by the number of cases for comparison, I have come to classify them under three heads, viz.: 1. Developmental neurasthenia. 2. Overstimulation neurasthenia. 3. Developmental plus overstimulation neurasthenia.

A long discussion of the symptomatology of each of these classes is foreign to the object of this paper. It will suffice for our present purpose to indicate the distinguishing features of the two primary classes, as the third class partakes, in varying degrees, of the qualities of the other two.

Neurasthenia, whether due to abnormal development or over-stimulation, exhibits itself symptomatically in fatigue, especially that of brain and muscle. We rely on the history and the symptoms associated with fatigue in determining the class to which a given case belongs, and, as will appear, the course to be pursued in the treatment.

## DEVELOPMENTAL NEURASTHENIA.

There are some individuals in whose lives a nerve asthenia is an evident and prevailing factor from the cradle to the grave. Most of them are the offspring of degenerate parents and the neurasthenia is inherited. Occasionally individuals are born with a constitutional nerve weakness which can be traced to no taint in the immediate or remote ancestry, and then it is due to some adverse influence during fetal life; some disorder of nutrition during the developmental period; some accident of labor; or perhaps, unhealthy environment and habits during the formative years of childhood. Neurasthenia due to abnormal development usually manifests itself at an early age, but is either disregarded by the guardians of the child, or they trust to time for a cure. Instability and imperfect balance characterize the activity of the brain and cord in these nervous children, who commonly combine an inability to sustain prolonged exertion with an unusual cleverness of thought and action.

The developmental neurasthenic who eventually comes under professional care is usually a woman of remarkably healthy appearance, who complains most of a chronic fatigue. Her other symptoms are various, indefinite, and legion. Many of them are not incompatible with health, many more are exaggerations of normal physiologic functions, but she readily discloses the fact that they are nearly, if not quite, all associated with exertion, and consequently with the fatigue which follows it. She appears well nourished, but her flabby muscles, weak heart, insufficient respiration, and languid air tell us more plainly than words, that under the superficial accumulation of unoxidized fat there are nerves and muscles, a heart, stomach, and other organs which years of indolence have made inactive.

It is quite evident that what such a patient needs is not rest, but *exercise*—such exercise as shall tend to harmoniously develop and strengthen every part of the physical organization. Much care needs to be used in inaugurating such a course of physical training, because self-confidence is at low tide, habits of mind and body are slow to yield, and a failure of persistent effort is not only easy but wofully discouraging. It is seldom possible to bring such patients sufficiently under the directing and moral influence of physician and nurse in their own homes, but oftentimes intelligent treatment in the routine course of an institution will bring about a comfortable degree of resistance to fatigue, and such an amelioration of the symptoms as amounts almost to a cure. The change of diet and surroundings, and the carefully graduated physical culture must be combined with stimulating and eliminative hydrotherapeutic measures and massage. And it may not be out of place to remark, that these patients should have the judicious sympathy of their attendants, and a ready attention to their petty complaints, that their coöperation and confidence may be secured, for without these latter it is needless to attempt a cure.

### OVERSTIMULATION NEURASTHENIA.

In this class belongs the individuals born with nervous strength equal to their general organic hardihood, but whose baneful habits of life end finally in the exhaustion of their inherited nervous vitality. Habitual overstimulation is the physiologic expression of the cause. In contrast to the vast majority of the neurasthenias of development, which are inherited, those which result from overstimulation are all acquired.

Usually they are men in the prime of life, so far as years are concerned; business men worried by their affairs, troubled by sleepless nights and hurried days, until the brain fags and the nerves are "on edge." Equal strife for wealth and position, equal emergencies in business, responsibilities, exhausting labors, etc., do not exhaust equally the nervous vitality of different men, for the pace that kills the common horse only strengthens the thoroughbred.

To this class also belong the overworked and underfed student, the society "bud" who rests little from the excitement of her first seasons, the minister of the gospel who assumes too much work and responsibility, and all of that large element of American men and women who inherit nerve strength sufficient for the places in life to which they are born but insufficient for the strain which the circumstances of a more ambitious career throw on them. Any endeavor will sap the nervous force which drives the blood too fast and too long through the brain, exhausts its energy, gives it insufficient time for relaxation and repair, and takes from the remaining organs of the body the blood they need for removing the waste matter and restoring the wearing cells. Those who acquire neurasthenia usually suffer from indigestion and all the evils attending malnutrition and defective elimination.

When body and brain finally refuse to respond longer to stimulation, they strike, and "nervous prostration" is the result. We then have the lamentable spectacle of a "nerveless," melancholy, dyspeptic man with no confidence in himself and no abiding faith in others, tremulous, hesitating, incredulous, often suicidal. He is afflicted with insomnia, morbid fears, nervous chills, seminal emissions, flatulency, constipation, pain through the loins and back, weariness, and general debility. Digestion is deranged, malassimilation and malnutrition supervene, and a consequent loss in weight adds to the depression of his mind.

Evidently what such an individual needs is *rest,* as complete as it is possible to have, food for his wasted tissues and an opportunity for them to be restored. The rest cure is the treatment par excellence for the neurasthenia of habitual overstimulation.

In addition to complete rest and feeding, general massage, combined with passive movements; special abdominal massage; hot fomentations along the spine and over the stomach and liver; saline spongings, and general faradism are measures promoting elimination of fatigue and waste products and increasing the general muscular and arterial tone. This supplementary treatment is all sedative and nutritive, and should be given in the quietness and subdued light of the rest chamber, by a nurse adapted by disposition and training to care for rest-cure patients.

Some degree of gastric dyspepsia accompanies the neurasthenia of overstimulation. It exists in the form of a neurosis, and consequently presents as varying aspects as does the neurasthenia itself. An analysis of the stomach contents after a test-meal to-day may show more or less hyperacidity, while a repetition tomorrow may show a subacidity or even an anacidity. The rest treatment of the neurasthenia benefits the gastric neurosis, and the recovery of the latter precedes or keeps pace with the former. Nitrohydrochloric acid and nux vomica should be administered.

Besides the psychic causes already enumerated, neurasthenia may be acquired in consequence of the derangement or misuse of the organs. Gastric hyperacidity and abuses connected with the sexual affections may be mentioned as especially frequent forerunners of the disease. The former, due to habitual gluttony, causes undue stimulation of the stomach to excessive secretion, and results eventually in gastric fermentation, starch indigestion, intestinal dyspepsia, and ptomain poisoning. Gorging, toxemia, increased acidity of the blood, and gastric irritability find expression in "nervousness," "fidgets," insomnia, "blues," lassitude alternating with periods of intense energy, and all the other symptoms of uricacidemia. The attack of so-called "nervous prostration" may finally come precipitately. Inability to control the hand in writing, or to concentrate the mental faculties to the business in hand, a wavering disposition, a lapsing memory, take the place of the energy, firmness, power of prolonged application, and general high-pressure activity that previously characterized the individual.

Gastric hyperacidity and the neurasthenia which follows it are benefited by the rest cure. The diet in these cases requires careful management, for most patients will need a dry one, restricted in amount, and with little residue, until the habit of prodigious stimulation under which the stomach has been accustomed to act, is broken up. Loss in weight is the rule, and a long course is often necessary to re-establish the organic functions on a healthy basis. Liberal draughts of mild saline waters are exceedingly beneficial in promoting nutrition and the elimination of the toxins from the body. Colonic flushings, to counteract the constipation and clear the large bowel, will be found valuable. They are stimulating to the circulation and sedative to the nervous system. But of all the adjuvant measures of utility in cases of neurasthenia accompanied by hyperacidity, the best one is gastric lavage, which should be given twice each week, at regular intervals, an hour before taking food. After the patient has emerged from the rest-cure chamber a rest of half an hour in recumbent posture should be strictly enjoined, and the stomach washings should be continued until the patient has recovered, though they may be diminished in frequency during the last weeks of convalescence. In the after-treatment only very moderate exercise should be taken and that not immediately after meals. Indeed, rest in bed for half an hour should be the rule after the noon meal until recovery is complete. This course differs from the method adopted for overstimulation neurasthenia from psychic causes, for there abundant exercise in the open air is enjoined, and the cultivation of athletic pursuits and calisthenic exercises advised.

There is a class of cases, common among women, in which neurasthenia seems to be closely connected with the sexual affections. In the psychic cases hitherto mentioned the intellectual faculties have played the greater part, but it is the emotional faculties which overreach the capacity of the individual's endurance. Psycho-sexual emotions are serious and frequent offenders. Excessive indulgence, sexual uncongeniality, and a trifling with various methods of preventing [illegible]n are probable causes of emotional overstrain, with nervous prostration as a grave consequence. Unrequited love, love-longing, conjugal infelicity, and diseases disqualifying for sexual pleasure and gratification, have each their quota in the ranks of this class.

The rest cure, as outlined above under the treatment of overstimulation neurasthenia, meets every demand here, and recovery is likely to take place promptly. In cases connected with abuses of sexual intercourse, unless the physician assume the unwelcome task of teaching husband and wife the physiology of the sexual act, and it be then indulged in with moderation and to the mutual pleasure and gratification of both, relapses are likely to occur. Regarding the other conditions mentioned, little need be said, but any organic disease of the sexual organs, bladder, rectum, etc., should at once receive its appropriate treatment.

### DEVELOPMENTAL PLUS OVERSTIMULATION NEURASTHENIA.

Either the developmental or the overstimulation element may be the chief factor in a neurasthenia in which both are concerned. The degree of nerve strain necessary to precipitate an attack of neurasthenia is in inverse ratio to the degree of developmental weakness. Just how much is due to insufficient nervous vitality and how much to the abuse of what vitality there is in any given case is a delicate matter to determine, and for the purpose of treatment an approximate estimate must be made.

In those cases in which loss of weight, dyspepsia, headache, neuralgia and other symptoms indicating a failure of nutrition accompany a history of recent nervous overstrain, the rest cure is the best thing, preliminary to subsequent treatment to develop nerve vitality as indicated above under the first class. On the other hand, with patients who have succumbed to a slight overtaxation of the nervous system, the overstimulation element may be disregarded altogether, and treatment for the development of nerve force instituted at once, and it is with this class that a sea voyage or a sojourn among the mountains proves most beneficial.

# INTRALARYNGEAL INSUFFLATION.

## FOR THE RELIEF OF ACUTE SURGICAL PNEUMOTHORAX. ITS HISTORY AND METHODS WITH A DESCRIPTION OF THE LATEST DEVICES FOR THIS PURPOSE.

BY RUDOLPH MATAS, M.D.

NEW ORLEANS, LA.

*(Concluded from page 1375.)*

### HISTORY OF PULMONARY INSUFFLATION AS APPLIED TO THE SURGERY OF THE CHEST.

It is difficult, if not impossible, to ascertain to whom belongs the credit of first suggesting the value of pulmonary insufflation in thoracic surgery. It is probable that the same thought occurred to many observers who were interested in the same problem simultaneously. As indicated by the preceding review of the evidence, it is plain that no originality can be claimed for the procedure itself, or even for the appliances used, since we see that the fundamental ideas have been thoroughly exhausted by a large number of investigators who during the eighteenth century developed the practice by successive contributions until it reached its maturity at the present time. In its surgical phases the thought of inflating the lungs to counteract the evil effects of pneumothorax must have forced itself upon the attention of many of the practical surgeons of the modern period—the period of the Listerian renaissance—in which the feverish activity of the enterprising operators in quest of new fields of splanchnic conquest found itself blocked by this apparently insurmountable barrier in the thorax. They must have realized that while all the other conditions for success were ripe for the invasion of the chest this one great desideratum was still lacking.

In trying to discover when and where this suggestion originated, or where it was at least first put on record, we find that most of the references cluster about the period embraced from 1872 to the present time. Pean, the distinguished Parisian surgeon, is reported to have appreciated the importance of increasing the intrabronchial pressure in intrathoracic operations. In one instance in which he resected a portion of the sternum for the removal of a mediastinal growth he operated in a chamber much like a diving-bell, within which a pressure of two atmospheres was maintained. The operation presented great difficulties, and the patient died on the second day. I can find no reference to this case, but I quote it from H. Milton, of Cairo. (*The Lancet*, London, March 27, 1897.) Délorme, in a discussion at the Société de Chirurgie, Feb. 16, 1897, referred to M. Lambotte, a Belgian surgeon, as having advised, some time before him, the artificial inflation of the lung in surgical conditions. Délorme himself said that the need of an appliance to inflate the lungs had occurred to him when he first performed his operation of decortication and liberation of the imprisoned lung in chronic empyema. But the surprising manner in which the lung expanded spontaneously and filled the pleural cavity after it had been released from its confining shell of exudates, in his first case, and in another, operated upon by Lardy, of Constantinople, showed him that the expansion of the lung could be effected without the help of such appliances and by the efforts of nature alone. He believed that a sufficient increase in the intrabronchial pressure is obtained by the closure of the glottis in the paroxysms of cough that occur in the course of the operation. But that nature's unaided efforts are uncertain and can not be trusted under such circumstances is proved by other operators who, in more than twenty-seven instances of the same kind, have adopted Délorme's procedure. Cases of this class in which the lung is forced into activity after a long period of inaction, and when ample opportunity is given to the organism to accommodate itself to a crippled respiratory function, are not apposite to the acute conditions here considered, as in these the desideratum is to obtain a certain means of preventing acute pneumothorax in surgical operations. But it is to Tuffier and Quénu, with their associates, Hallion and Longuet, and to Doyen and to H. Milton, that we owe the chief debt of recognition for their scientific demonstration of the value of artificial inflation of the lung through the larynx for the prevention and relief of surgical pneumothorax. Tuffier and Hallion reported their first experiments to the Société de Biologie, November 21, 1896, and Tuffier read a paper on the same subject in the Société de Chirurgie in February, 1897 (*Bulletin et Mem. Société de Chirurgie,* February and March, 1897). The great merit of these observers is that they obtained the desired result by insufflating the lung through an *intralaryngeal* tube, and that they secured the necessary data by which to regulate the intrabronchial pressure with scientific accuracy.

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*Read at the meeting of the Southern Surgical and Gynecological Association, held at New Orleans, November, 1899.

Coincidently with Tuffier and Hallion's experiments with intubation, Quénu and Longuet undertook an extensive series of researches chiefly with the view of ascertaining the best means of securing pleural adhesions. Realizing all the difficulties which attended this procedure whenever it was attempted after collapse of the lung had taken place, they independently began to experiment with insufflation of the lungs by means of a cylinder of compressed air connected to a canula tied to the trachea. They also tried the simpler plan of making the animal breathe in an atmosphere of compressed air by enclosing the head in an apparatus somewhat like a diver's suit. Notwithstanding the manifest imperfections of their methods, as compared with those of Tuffier and Hallion, they convinced themselves of the enormous advantages of any procedure that will force the lung to remain in contact with the chest wall. They also observed the facility and safety with which the lung can be explored; and, in addition, the tendency to spontaneous hemostasis displayed by the lung when it becomes herniated in the parietal wound under these conditions. In conclusion, they state their conviction that it is in this direction that further efforts must be made if the surgery of the chest is to make further advances. Following closely on the studies made in France, Mr. H. Milton, of the Medical School of Cairo, Egypt, published an article on mediastinal surgery in *The Lancet*, London, March 27, 1897, pp. 1872-75, in which he describes an original procedure for the free exploration of the anterior mediastinal organs. He demonstrated in this communication not only that the mediastinal contents are accessible to the surgeon, but that, by tracheal insufflation with a bellows communicating in the trachea through a canula, the dangers of surgical pneumothorax could be overcome. This operation, called by him "the median normal thoracic incision," consists in a long incision which extends from the cricoid cartilage to the xiphoid appendix in the median line. He saws the sternum in half, and each half is forcibly retracted, leaving an open space between the bones four or five centimeters broad, which permits easy exposure and exploration of the trachea, the vessels at the root of the heart, innominate artery and veins, pericardium, bronchi, lungs and pleuræ. He first tried his procedure on a goat. In the course of the operation the pleura was torn, and fatal pulmonary collapse would have followed had he not resorted to direct insufflation through the tracheal canula, thus immediately distending the lungs and maintaining artificial respiration. He then closed the pleural rent, and the animal recovered without signs of very serious disturbance. Satisfied with this result, he operated on an Egyptian fellah, who had tuberculosis of the sternum and mediastinal glands. The patient recovered. He demonstrated by this case that even after the total suppression of costal respiration, which must follow the excision of the sternum, the diaphragm is quite sufficient for the needs of pulmonary respiration. Milton's merit consists not only in demonstrating the technical practicability of opening the anterior mediastinum as a route to surgical intervention in the human subject, but in the fact that he was one of the first, if not the first, to operate on a human patient with a thorough knowledge and appreciation of the value of insufflation in preventing the accidents of pneumothorax.

The experimental work done in France by Tuffier and Quénu was limited to dogs and other animals, and was done with imperfect instruments, but the practical, ever-ready mechanical genius of Dr. Doyen, of Rheims, now of Paris, promptly grasped the possibilities of the method, and we now owe to him the first finished model of an intubating and insufflating apparatus for the systematic application of this treatment as a preventive of pneumothorax.

This apparatus was first described in his admirable treatise, "Technique Chirurgicale," pp. 129-133, which was published in 1897, and subsequently in a short article, "La Chirurgie du poumon," which appeared in the *Revue de Therapeutique Medico-Chirurgicale*, Jan. 15, 1898, Vol. xlv. We presume that his invention was the result of independent studies on the subject, as he does not mention the researches of his contemporaries in his work. His apparatus consists in a set of intubation canulas which fit into the glottis and are introduced by a special forceps.

These tubes have a close resemblance to the O'Dwyer tubes for intubation in diphtheria (he does not mention O'Dwyer, however), and are connected with a *hand-bellows* of his own device, which may be used either as an insufflator or an aspirator. The bellows is a double chamber which automatically injects and aspirates when closed or opened, by means of the vertical movements of the handles. One of the chambers receives air or oxygen, and the other the expired or aspirated air from the patient. It is not easy to describe the mechanical details, but the accompanying figure will give a clear idea of its appearance.

From all this we see that Tuffier and Hallion, Quénu, Longuet, Doyen and Milton were working at the same problem at about the same time; that is, in the course of three years they all arrived at the same conclusions independently of each other.

My personal experience in thoracic cases and the evidence I had gathered in the course of animal experimentation had long ago impressed me with the importance of acute pneumothorax as one of the most formidable bars to the successful issue of intrathoracic operations, and kept me alert for all practical suggestions to counteract it. But it was not until 1897, when I read an account of Tuffier and Hallion's experiments as reported to the Société de Biologie, November 21, 1896, that I realized that thoracic surgery was on the eve of a revolutionary innovation.

I was particularly impressed with the experiments on a dog in whose larynx Tuffier inserted through the mouth a long copper tube attached to a bellows. Artificial respiration being thus established, the pleura was freely incised through an intercostal space, and the edges of the wound were kept apart to allow air to enter freely. The pleural cavity was then illuminated with a small incandescent lamp, and it then became an easy matter to perform operations on the esophagus and pneumogastric nerve, etc., without interfering with the respiration. This and other dogs similarly treated survived several months without suffering serious disturbances. About this time I received a copy of the medical and surgical reports of the Presbyterian Hospital of New York for 1896, which contained a brief but excellent article on the use of the Fell-O'Dwyer apparatus for the treatment of opium narcosis in other non-surgical conditions in which prolonged artificial respiration was necessary to overcome the failure of the respiration. (See Fig. 5.) The reading of this article, together with the repeated demonstration of its unfailing and almost marvelous efficiency in similar cases, at the hands of our colleague, Dr. J. D. Bloom, at the Charity Hospital, immediately suggested to my mind a solution of the difficult problem that had so long interested me. The suggestion grew upon me, but I had no favorable opportunity in which to try the apparatus. Still, I felt so confident in its reliability and future importance in advancing the interests of intrathoracic surgery that I made pulmonary insufflation with the Fell-O'Dwyer apparatus one of the main topics of my address as chairman of the section on surgery at the meeting of the Louisiana State Medical Society, held May 10, 1898.

The suggestions then made fortunately fell on fertile soil, and I am gratified at the thought that their correctness should have been so brilliantly demonstrated by my colleague, Dr. Parham, whose interesting and brilliant case of resection of the chest walls for sarcoma served as a basis for the exhaustive and learned monograph which he contributed last year with so much credit to himself and to the proceedings of this Association.[1]

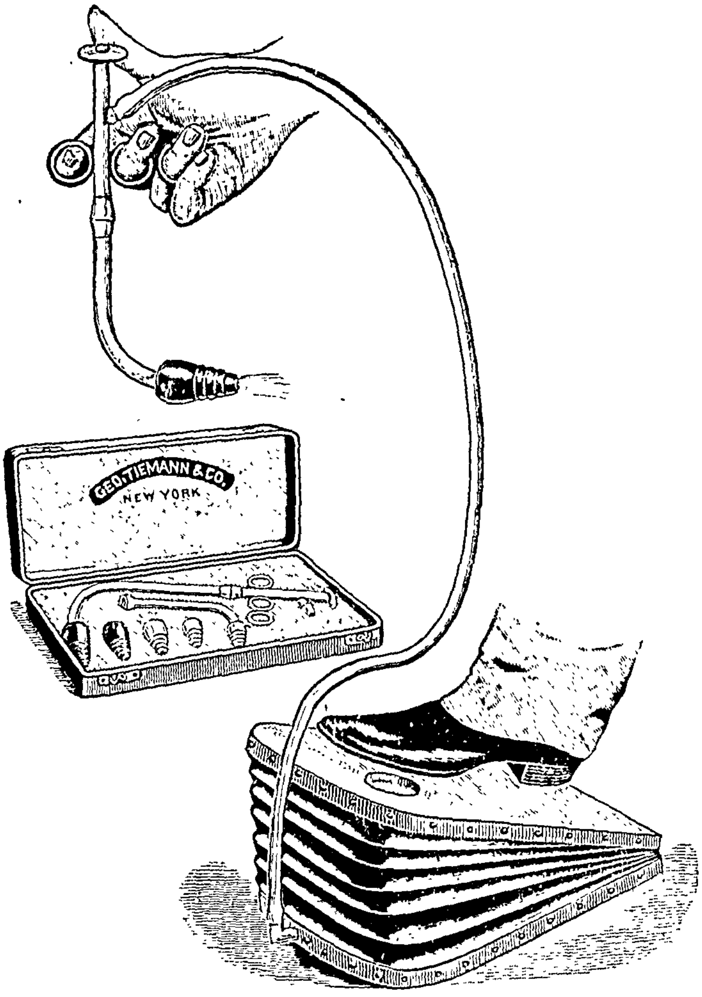

Fig. 5.

The original Fell-O'Dwyer apparatus as used in the Presbyterian Hospital of New York. (From "Medical and Surgical Reports of the Presbyterian Hospital," for 1896. See article by Dr. W. P. Northrup, p. 132.)

## THE TECHNIQUE OF PULMONARY INSUFFLATION AS APPLIED IN THORACIC SURGERY.

The history of artificial respiration by insufflating the lung through an intraglottic canula would scarcely be complete without some reference to the technique of its application in the most recent phase of its development—thoracic surgery. Fortunately this is elementary in its simplicity, and needs but little experience for its successful application in practice. All that is required is: 1. A properly shaped tube which will fit in the larynx while it is steadily held in place by the hand of the operator. 2. A *tubular attachment* leading to a bellows which will furnish the requisite pneumatic power to distend the lungs. As stated by O'Dwyer in his commentary upon the original Fell apparatus, all that is required is to get air into the lungs and give it sufficient room to expand and time to escape; the power generated and stored up in overcoming the resistance to inspiration being amply sufficient to carry on expiration. This is precisely what Chaussier, Depaul, Marc, Gairal, Ribemont and a host of others practically ascertained long ago. Since no mechanical assistance is required for expiration, all complex pumps and bellows which alternately inflate and aspirate the lungs are superfluous and, if anything, disadvantageous. It is only in certain conditions that an occasional sustained aspiration may be serviceable in facilitating the expulsion of mucus, water or foreign bodies that may be present in the trachea, but these conditions are rare since the strong expiratory efforts which follow a forced inspiration usually accomplish all that is required without artificial asistance. No instrument of percision is needed in practice to measure the exact amount of air pressure that is required to distend the lungs. All that is required in practice is to observe the effect of the insufflation on the patient himself: the elevation of the ribs, filling of the intercostal spaces and bulging of the epigastrium. These tell us immediately when insufflation is doing its work. The depression of the ribs, sinking of the epigastrium and hollowing of the intercostal spaces tell us exactly when and to what extent expiration has occurred. It is only *important that the apparatus* should be provided with a bellows or an air-pump large enough to insufflate the amount of air that is required to fill up the lungs with one continuous movement. It is also important that the intralaryngeal canula should be large, for the free and unobstructed expulsion of the expired air. This is exactly what the apparatus devised by George H. Fell, of Buffalo, and modified by O'Dwyer will accomplish. The apparatus originally presented by Dr. Fell at the International Congress held in Washington, September 7, 1893, consisted simply of a hand bellows connected to a tube inserted in the trachea; this apparatus he modified himself by substituting for the tracheotomy tube a face mask which fitted closely over the nose and mouth; the air was thus forced into the larynx through the natural passages, and the expired air was allowed to escape externally by a side outlet in the injecting tube, the outlet being opened or closed by the finger of the operator. (See Fig. 9.) The disadvantages and uncertainties of the oro-nasal method have been so thoroughly pointed out by all observers from the most ancient times to the present that we need not insist upon them. Hence, we find that in cases in which the simple oro-nasal method is not satisfactory, Fell resorts to the tracheotomy. The additional dangers of tracheotomy led O'Dwyer to so completely modify Fell's appliance that the apparatus at present sold by manufacturers as the Fell-O'Dwyer apparatus is in reality an original instrument solely in virtue of O'Dwyer's modification. O'Dwyer's improvement consists in a long intubation canula that is fitted with a conical tip so graduated in size that it will fit almost any larynx. There are several laryngeal tips to fit the larynx according to ages. The conical tip is so designed that it will readily wedge itself into the glottis, and prevent air from escaping between it and the laryngeal walls. The proximal end at the handle is practically bifurcated, one branch receiving the ingoing air from the bellows, the other branch, stopped by the operator's thumb (which acts as a valve), serves as an exit for the air. (See *Fig. 5.*) While I have shown in the historical part of this paper that the O'Dwyer apparatus as it is known at present has been *anticipated* in its individual constituent parts as well as in the principles of its action by many experimenters, it must be recognized that for simplicity and efficiency it has no rival. It is also quite original in some details of importance, more especially in the form of the tips, which are admirably adapted to fit the larynx of all patients and all ages and in the control of the outlet, which is opened and closed by the thumb of the operator, thus dispensing with all mechanical valvular arrangements.

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[1] Thoracic Resection for Tumors Growing from the Bony Wall of the Chest, by F. W. Parham, M.D. Transactions Southern Surgical and Gynecological Association, vol. xi., 1899.

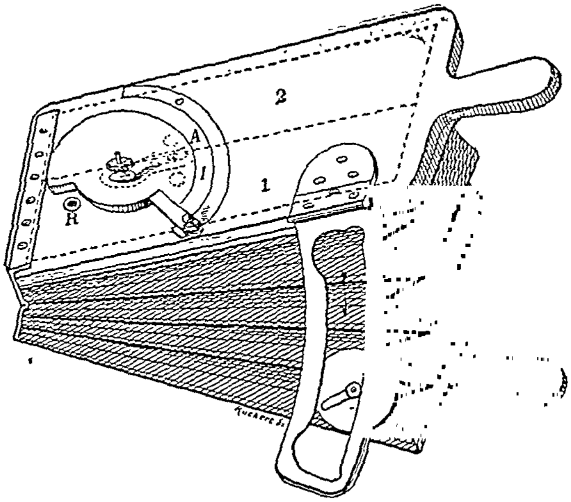

FIG. 6.

*Doyen's compound automatic hand-bellows for insufflation and aspiration of air in and out of the lungs. (From Doyen's "Technique Chirugicale," p. 128.)*

O'Dwyer's instrument possesses several advantages over the apparatus designed by Doyen (see Figs. 6, 7 and 8): First, in the greater ease of its introduction; second, in the better adaptation to the various sizes of the glottic aperture through its graduated conical tips; third, in the fact that it is a continuous resisting metallic instrument from the glottis to the handle, and requires no auxiliary forceps for its introduction; fourth, in the fact that it can be used as a tractor which favors the elevation of the larynx and steadies the tongue; fifth, in the fact that it can remain *in situ* and still permit of normal respiration or of artificial respiration when this is required; sixth, in the security that it furnishes against accidental obstruction by the bite of the patient. (The Doyen *connecting* tub made of rubber, and can be easily compressed betv the jaws.) As a whole, therefore, it is difficult to ceive any *contrivance* better adapted for its pur than the O'Dwyer instrument.

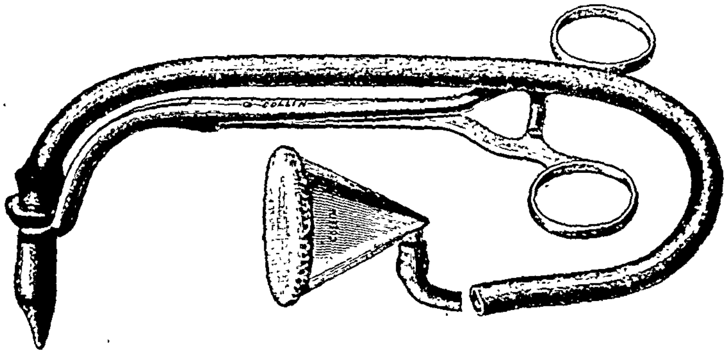

FIG. 7.

Doyen's intralaryngeal tube and rubber connections, with funnel attached, for laryngeal tamponade and chloroform anesthesia. The cut shows the special forceps used to introduce the tube. The intubating canula may be used *for direct air insufflation. (From* Doyen's "Technique Chirurgicale, Fig. 43, p. 123.)

Since its introduction in the Charity Hospital, Bloom has found it advantageous to modify the cessory or inflating part of the apparatus by several ditions which deserve mention, as they save unneces exertion on the part of the operator and diminish strain on the bellows. These consist in the additio a long lever, which is used as a treadle to compress bellows with the foot, and in the addition of a met cylinder which is fitted with absorbent cotton to f the air as it passes from the bellows to the patient. Fig. 10, Dr. Bloom's modification of the Fell-O'Dv apparatus.)

In constructing an insufflating apparatus for my use it also occurred to me that the original O'Dv apparatus could be advantageously modified for su cal purposes. *As originally designed, the* Fell-O'Dv apparatus was intended solely for non-surgical con tions, principally for the treatment of opium narco Consequently no provision was made by the originat *for the maintenance of anesthesia* while *artificial* res ation was being applied. I have, therefore, altered laryngeal canula by furnishing a branch and stopco *which are connected to a rubber tube and funnel.* funnel is covered with a flannel screen, and is used an inhaler, exactly as in the Trendelenburg canula.

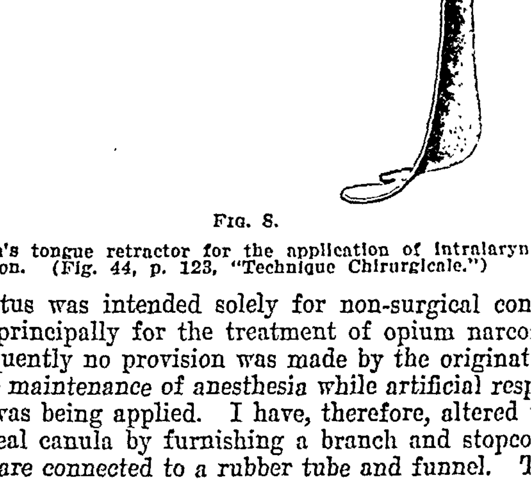

FIG. 8.

Doyen's tongue retractor for the application of intralaryn intubation. (Fig. 44, p. 123, "Technique Chirurgicale.")

The idea of administering anesthetics by intubat directly into the larynx is also a suggestion that has curred to several surgeons. Junker, I believe, at time referred to it, and illustrates an apparatus for purpose, *attached to his inhaler.* Doyen *uses a tube* funnel attached to his intubating canula, but has m no provision for this necessity in his insufflating app atus. *Our fellow and colleague,* Dr. Souchon, in 18 while experimenting with various methods of anesthe in nasopharyngeal practice, tried to administer chlo form through an intubating tube. but owing to the i perfection of the instrument and other difficulties did not persist in this direction. The advantage combining an anesthetic apparatus which can be read controlled, together with an intralaryngeal tam canula and insufflating apparatus, can be easily reali by anyone who has given any thought to this diffic and *formidable phase of surgery.* I have also modif the O'Dwyer instrument by altering the shape of the handle; in the apparatus here shown (see Fig. 11, author's modification of the Fell-O'Dwyer apparatus), the handle is shaped like that of a pistol; this shape permits of easy traction on the larynx and root of the tongue, a matter of no small consequence in amputations and operations on this organ, which is very desirable to bring the vascular and less accessible regions of the base as near the line of the teeth as possible. In addition to this I have added a registering mercurial manometer which will gauge the actual amount of pressure required to inflate the lungs. While this is not essential, the addition of a gauge transforms the original empirical apparatus into an instrument of precision which will be helpful when the instrument is to be handled by unskilled or inexperienced persons. It is important that the operator should always remember that the safety of insufflation of the lungs rests largely upon the manner in which it is applied, and that violence, undue haste and excessive pressure are liable to defeat the very purposes for which the instrument is intended. Tuffier and Hallion demonstrated in their experiments that a pressure of 6 mm. mercury is all that is required to overcome the elasticity of the lung and equalize the air-pressure. They also determined that an intrabronchial pressure equal to 33 mm. mercury arrested respiration. Hence the importance of thorough instruction in these matters and the value of a manometer for teaching purposes. I have also modified the apparatus so that it is provided with one aspirating as well as insufflating valve. While the aspirating valve is rarely used, it may occasionally find application in cases of excessive clogging of the larynx with mucus, food, foreign matter, and other substances that may threaten life by their presence. Furthermore, the aspirating valve may be utilized to insufflate oxygen pure or mixed with atmospheric air.

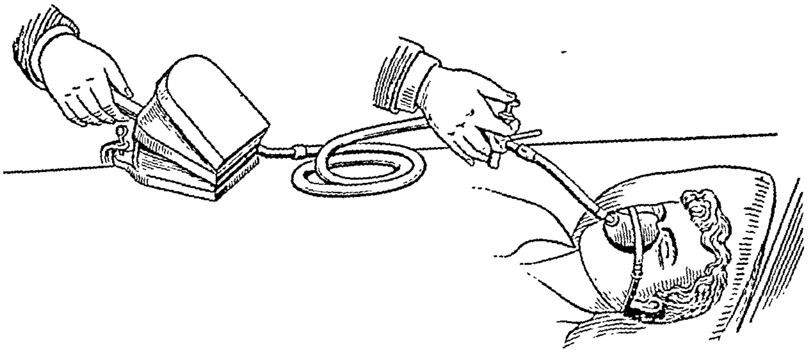

Fig. 9.

The original Fell apparatus for artificial respiration. (From Truax's "Mechanics of Surgery," p. 215.)

This shows the face shield and air central valve. In many cases of simple narcosis this apparatus *will suffice, but for surgical* insufflation of the lungs the int [illegible] tachment of O'Dwyer is indispensable. Th [illegible] by Fell, with hose and valve, may be used [illegible] bator.

In summing up the peculiarities of the apparatus that I have the pleasure of exhibiting to you I would call attention to the following facts:

The original O'Dwyer canula, while retaining its intralaryngeal portion unchanged, is modified so that it may be utilized: 1, as a respirator; 2, as a tampon canula; 3, as an anesthetizer; 4, as a tractor of the larynx and tongue; 5, as an insufflator; 6, as an aspirator. I need not emphasize the value of an intralaryngeal apparatus that, while allowing of anesthesia and artificial respiration, will also act as a laryngeal plug. In this way the complicating operation of tracheotomy is eliminated, and extensive operations on the tongue, palate, nose and nasopharynx, in which Kocher's pharyngeal tamponade is indicated, can be performed without risk of suffocation from the entrance of blood in the larynx, and without resorting to Rose's position.

Anyone who has attempted the removal of a vascular fibroma of the pharyngeal vault, or has tried the total extirpation of the tongue, will readily appreciate the value of an apparatus that will permit of easy respiration while the larynx is securely plugged.

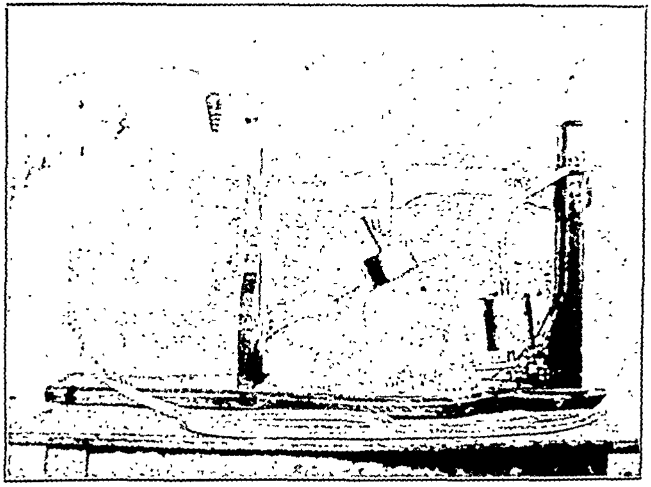

Fig 10.

Dr. J. D. Bloom's modification of the Fell-O'Dwyer apparatus as used in the Charity Hospital of New Orleans. The following points can be readily noticed in the illustration: 1. Bellows for insufflating air. 2. Cylinder and tube over inlet of bellows. The tube may be attached to an oxygen gas bag or cylinder, in cases of asphyxia in which it is desirable to supply pure or diluted oxygen directly to lungs. 3. Cylinder filled with absorbent cotton to filter the air after it has escaped from the bellows. 4. Rubber tubing connecting bellows with intralaryngeal tube. 5. Intralaryngeal tube and handle. (Original O'Dwyer instrument.) 6. Treadle or lever operated by the foot to compress bellows. May also be used as a hand-lever.

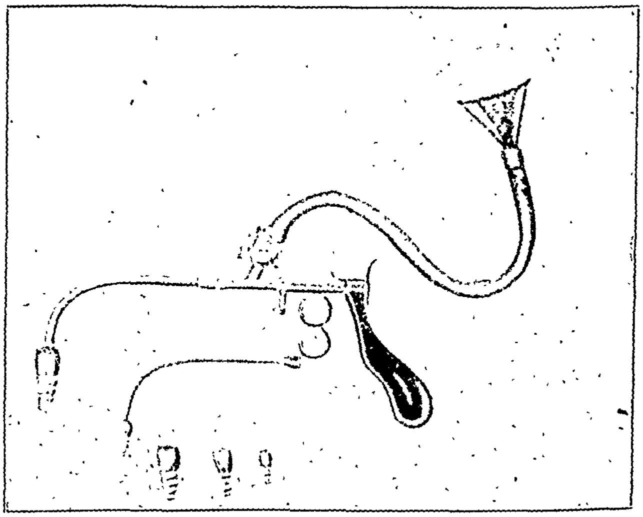

Fig. 11.

The author's modification of O'Dwyer's intubating apparatus for surgical cases in which artificial respiration or pulmonary insufflation may be required with anesthesia. The stopcock controls the supply of the anesthetic without interfering with the passage of air furnished by the bellows or air pump.

While I fully recognize the comparative rarity of the cases in which intralaryngeal tamponade is required, and I am the first to admit that with the help of a modified or mixed morphin-chloroform anesthesia and Rose's position, the majority of oropharyngeal operations can be performed without the aid of an intubating apparatus, I believe that there are occasions in the practice of every active surgeon in which such an apparatus as I have shown you will prove a veritable Godsend.[2]

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G. Tourdes: Submersion. Dict. Encyclop. des Sciences Med., Dechambre, Tome xii., (3me Série.) 1883.

The author: The Surgery of the Chest and Some of the Problems Related to the Treatment of its Penetrating Traumatisms and their Immediate Complications. An address by the chairman of the Section of Surgery. Trans. La. State Med. Society, 1898. [The first twelve propositions in the introductory section of this paper are almost literal condensations of statements made in this address.]

The author: On the Management of Acute Traumatic Pneumothorax. Annals of Surgery, Philada., vol. xxix., 1899, pp. 409-434.

# Therapeutics.

**Correction.**—In the item on "Pruritus Ani," in THE JOURNAL of May 26 (p. 1330), the word "varicosity" should be substituted for "pruritus" in the seventh line.

## Carbonated Saline Baths in Renal Disease.

At the Twenty-first Congress of Balneology, held recently at Frankfort-on-the-Main, Leber (*Berliner Klin. Woch.*, April 2, 1900, p. 310) stated that, heretofore, in the treatment of chronic diseases of the kidney—contracted kidney—the greatest stress has been laid on reduction in the amount of albumin eliminated, and to this end, in addition to other dietetic measures, only white meat prepared in an unirritating manner and large quantities of fluid in the form of milk and alkaline waters were prescribed. In consequence of the monotony of the diet the appetite of the patient was not stimulated, and on the other hand, in consequence of the generous administration of the fluid, there was increased danger of relaxation of the heart, which is likely to occur even under the most favorable conditions in cases of contracted kidney. In order to avert the latter, and the greatest, danger, it has become customary within recent years to diminish and carefully regulate the amount of fluid given and to send the patients to resorts at which the carbonated saline baths employed in the treatment of diseases of the heart are available, and where all other forms of heart-exercises are employed.

Leber has treated a number of cases of renal disease according to these principles, particularly since two new springs have been sunk within two years at Hamburg, and which, in the amounts of saline matter and carbon dioxid that they contain, compare favorably with the best of the springs of like character. The cases included, with a few exceptions in which the compensation of the heart was still preserved, principally patients with contracted kidney already suffering from symptoms of cardiac asthma and dilatation of the heart. Keeping in mind the peculiar conditions of vascular pressure in cases of contracted kidney, in accordance with which an increase of the blood-pressure is present and a reduction in the blood-pressure takes place in conjunction with derangement of compensation, and in cases of obesity, most rigorous individualization is required with regard to the amount of saline matter and of carbon dioxid present in the water and of the temperature of the bath. In this way diminution in the area of cardiac dulness was effected, with an improvement in the pulse as regards strength, regularity and frequency. As a further adjuvant in the treatment, sponging with tepid or cool water and systematic exercises were employed, the first only in a few cases in order to stimulate the peripheral and relieve the internal circulation, and the latter in all cases, although many authorities consider the systematic exercises contraindicated in cases of chronic nephritis and arteriosclerosis. Proper respiration during the exercises is of the greatest importance, and in some cases systematic respiratory exercises should at first take the place of all others.

## For Hay-Fever.

| | | |
|---|---|---|
| ℞. | Zinci phosphidi | gr. 1/16 |
| | Quininæ sulphatis | gr. ii |
| | Ext. belladonnæ | gr. 1/8 |

M. Sig. One pill before each meal.

—*Wells: Medical Record.*

## Sore Nipples.

| | | |
|---|---|---|
| ℞. | Balsam Peru | |
| | Tinct. arnicæ, āā | ʒss |
| | Ol. amygdalæ express | |
| | Aquæ calcis, āā | ℥ss |

M. Sig. Shake well, and apply to inflamed nipples with a camel's hair brush after cleansing them with borax and water.

—*Scarff.*

## Treatment of Dysentery.

Gastinel has obtained excellent results from the rectal injection of potassium permanganate in dysentery, says the *Therapeutic Gazette.* He employs the drug in the strength of eight grains to the quart. Half of this quantity is given at a dose, and is allowed to remain in the bowel from half a minute to two minutes. The water is either cold or warm, according to the needs of the case. For the removal of large quantities of mucus in the bowel he employs an injection of a pint of water in which is dissolved thirty grains of sodium bicarbonate. This is followed by a permanganate injection, and after that has been given the patient is made to lie down and rest for at least half an hour, in order to secure immobilization of the intestine. It is claimed that by this treatment the pain and restlessness are diminished. In many cases it is only necessary to inject one or two ounces of fluid. Often it is wise to give a small dose of calomel for a time, to increase the hepatic activity. When children receive this treatment, one or two grains of permanganate to the quart of water is sufficient.

## Hypodermic Use of Orthoform.

Dr. Florentino A. Loza says that the formula used in the military hospital at Buenos Ayres, for associating the analgetic action of orthoform with calomel, used hypodermically in syphilis, is as follows:

| | | |
|---|---|---|
| ℞. | Ol. of vaseline | gr. 150 |
| | Calomel | gr. 67½ |
| | Orthoform | gr. 12 |

M. Sig. From fifteen to thirty drops of this preparation have been used without signs of intolerance or intoxication.—*N. Y. Med. Jour.*

## Varicose Ulcers.

Carl Beck uses a gelatin zinc cast in the treatment of varicose ulcers. The composition of the paste is as follows:

| | | |
|---|---|---|
| ℞. | Zinci oxidi | 20 parts |
| | Gelatini | 80 parts |
| | Glycerini | 20 parts |
| | Aquæ q. s. ad | 200 parts |

—*Med. Rev.*

## Pulmonary Emphysema.

For twenty days in each month give with each meal:

| | | |
|---|---|---|
| R. | Potassi iodidi | 10 |
| | Aquæ, q.. s. ad | 300 |

M. Sig. Dose teaspoonful.

During the remaining ten days:

| | | |
|---|---|---|
| R. | Sodii arsenatis | 10 |
| | Aquæ | 300 |

M. Sig. Teaspoonful.

Every eight days at bedtime take .10 to .15 gm. of aloes in a pill. Drink milk with meals and exclude tobacco and alcohol. If possible take compressed-air baths.

—*Jour. de Méd. de Paris.*

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[2] Since the reading of this paper and the exhibition of my apparatus before the Association, I have experimented with the view of substituting an air-pump operated by hand for the foot-bellows of the Fell-O'Dwyer apparatus. The action of the pneumatic pump can be regulated with the ease and nicety of an instrument of precision, and, when combined with a manometer and aspirating valve, is more suitable as a permanent instrument for hospital use, where the frequent calls made upon the apparatus are not as likely to impair its efficiency as is the case with the ordinary bellows. This last model has not yet been completed, and is, therefore, not illustrated in this paper.

### Alcoholism.

R. Spts. ammon. aromat............................ʒii
Tinct. camphoræ..............................ʒiss
Tinct. hyoscyami.............................ʒiiss
Spts. lavandulæ comp., q. s. ad...............℥ii
M. Sig. Teaspoonful every hour or two until relieved.
—*Aitken.*

℞. Zinci oxidi.............................gr. xvi
M. Div. in pil. No. xii. Sig. One pill three times a day.
—*Morris.*

℞. Zinci oxidi.................................ʒi
Piperinæ .....................................℈i
M. et. ft. pil. No. xx. Sig. One pill three or four times a day. (In chronic form.) —*Chapman.*

℞. Tinct. capsici
Tinct. zingiber, āā...........................℥i
Tinct. valerianæ ammon.
Tinct. gentianæ co, āā........................℥i
M. Sig. Take a dessertspoonful in teacupful of hot tea three or four times a day. —*Gerhard.*

### Gonorrheal Epididymitis.

In addition to local applications and rest in bed, the following, taken internally, acts most delightfully:

℞. Tinct. pulsatillæ....................gtt. xlviii
Syr. zingiberis................................℥i
Aquæ, q. s. ad................................℥iii
M. Sig. A teaspoonful every hour or two.
*Med. Fortnightly.*

### Care of Mouth, Throat and Nose in Typhoid Fever.

The nasal cavities and mouth should be washed out regularly and carefully with a weak solution of boric acid. If the patient is able to gargle, the following may be used to advantage:

℞. Salol ................................gr. lxxx
Tinct. benzoinæ........................gtt. xxx
Spt. menthæ pip..............................℥viii
M. Sig. One teaspoonful in a glass of water as a gargle. Cleanse the tongue and gums frequently by means of a bit of absorbent cotton held in forceps, and wet with boroglycerin (10 per cent.). Introduce several drops of menthol vaselin (5 per cent.) or boric-vaselin (10 per cent.) into each nostril.

### Ichthyol in Renal Tuberculosis.

Goldberg, in the *Berl. Klin. Woch.*, refers to Palet's statistics, and shows that of 136 cases of nephrectomy done for renal tuberculosis, 51, that is 40 per cent., died, and that only one-third of those operated on lived over one year. This is due to infection of other organs. He recommends ichthyol internally.

℞. Ichthyoli sulpho-ammoniac............ .....|
Aquæ dest, āā.......................... 20|
M.

Ten to seventy drops in water three times a day after eating. The larger the dose the sooner the curative action. Besides causing a general improvement, the local action was good—the hemorrhages ceased and the suppuration diminished, as did also the tenesmus and pain. It may be given for years.—*Ther. d. Gegenw.*

### Pultaceous Sore Throat in Children.

For pultaceous sore throat in children, Dr. E. Monmarson presents the following, which is said to be very efficacious:

℞. Calcium permanganate................gr. i—iii
Aquæ dest....................................ʒv
M. Sig. For external use.

The throat is washed out with a very warm boric lotion every three hours during the day, and once or twice during the night. After each washing out the affected parts are painted with the above solution, care being taken to detach the false membranes, but without undue force.

On the second day there is said to be manifest improvement, and, in the majority of cases, the disease is said to be aborted; the use of an exclusively milk diet and the administration of a few doses of antipyrin completing the cure.

### For Mumps.

℞. Ichthyol
Plumbi iodidi, āā.......................gr. xlv
Ammon. chlorid..........................gr. xxx
Lard ..........................................℥i
M. Sig. Apply to swollen glands three times daily.

## Medicolegal.

**Presumption As to Boy Under Fourteen.**—The Supreme Court of Georgia holds, Bird vs. State, that if, in the trial of a boy charged with the offense of assault with intent to rape, it be shown that the accused is under the age of fourteen years, a presumption arises that he is physically incapable of committing the crime; and, where there is no proof to rebut such presumption, a verdict of guilty is contrary to the evidence and to law.

**Statute Relative to Rape Constitutional.**—The Supreme Court of Washington holds that the statute of that state making carnal knowledge of a female under the age of 18 years the crime of rape is valid, and a proper exercise of legislative power. It also holds, in the case of State vs. Phelps, that the authorities relative to the common law crime of rape are not applicable to the crime designated in the statute, so that it is sufficient if the information conforms to the terms of the statute.

**Motive in Malpractice Case.**—The Wisconsin statutory provision that no action for personal injuries shall be maintained unless notice in writing of the injury, stating the time and place of its occurrence shall be served on the person causing the injury, within one year after such time, the Supreme Court of Wisconsin holds, in Meisenheimer vs. Kellog, is in the nature of a statute of limitations, and does not make the giving of the specified notice a condition precedent to a cause of action for malpractice. One of the technical consequences of this is, as brought out in this case, that, being a statute of limitation an objection that the notice was not given must be taken either by answer or demurrer, or it is waived, and the court even doubts whether the objection can be taken by demurrer, under the present Wisconsin statute regulating the grounds of demurrer.

**Concealed Venereal Disease in Wife.**—In Vondal vs. Vondal, a suit brought by a husband for the annulment of a marriage, the Supreme Judicial Court of Massachusetts has overruled exceptions to a decree for the wife and denying the husband the relief sought. It says, in explanation, that, although, at the time of her marriage, the woman was afflicted with syphilis, and knew of her disease, and concealed it from the man to whom she was married, the disease at that time was probably not contagious and could have been so treated that it would not be communicated by contagion and so as probably to make her free from suffering any ill effects from the disease. It is to be presumed that she could bear children, although her offspring would probably have been affected by the disease. The marriage was followed by cohabitation for four months, and consummation must be presumed. In other words the court holds, as it itself states it, that the concealed existence of venereal disease of such a character in one of the parties to a marriage which has been consummated is not a sufficient ground for a decree of nullity of marriage.

**Non-Expert Evidence on Insanity Not Curtailed.**—Section 1870 of the California Code of Civil Procedure provides that evidence may be given of the "opinion of an intimate acquaintance respecting the mental sanity of a person, the reason for the opinion being given." Apparently resting on this, it was held, in the murder case of People vs. Ellsworth, where the sole defense was insanity, that acts and declarations of the defendant could not be shown by the testimony of an acquaintance unless counsel also asked the witness his opinion of the defendant's sanity or insanity; counsel for defendant at the time stating that he did not intend to ask questions of that kind of the witness. This ruling, the Supreme Court of California holds, was erroneous. Section 1870, it says, refers alone to cases where opinion evidence may be given, and in no way curtails the right of the defendant to show his acts, declarations, etc., as evidence tending to prove his insanity. Whether or not those acts and declarations are simulated, it adds, is a question of fact for the jury. Another point, which the supreme court makes in this case, is that if fear that he was in great peril of his life working upon the defendant's mind in no degree partook of the character of a delusion, evidence of the fear, even if the latter was unfounded, was inadmissible as in any way tending to prove the defendant's insanity.

**A Libel on Its Face.**—A newspaper article, the Court of Appeals of New York holds, is libelous upon its face, where it charges a physician with a want of professional ability and integrity, and thus endangers the gain derived from his vocation. Such an article, it says, in Krug vs. Pitass, is one which, referring to a physician, as such, calls him a blockhead or fool, and appeals to all of the foreign-born population of a certain nationality in the city not to intrust themselves or their families to his professional care, when he so hates them that he would not help them if he could. These words, it says, have a direct relation to his business, and assail him in his capacity as a physician. They touch his profession, because they hold him out as unworthy of employment, and appeal to his old patients to no longer employ him. The reflection is not simply upon his character as a man, but upon his character as a physician, for it imputes a want of those qualifications which attract patronage, and are essential to the calling. It tends to undermine him in the confidence of the community, which is the foundation of professional success. Calling a physician, as such, a blockhead or food, necessarily reflects upon his ability to practice medicine, and speaking of him as so influenced by hatred toward his patients that he would not heal them, necessarily reflects upon his integrity as a physician. Therefore, the court holds that such an article is actionable without proof of any damages, for the law imputes malice in its publication, and presumes that damages have been sustained from the bare act of publication. But while the physician so libeled is thus entitled to recover on account of implied malice, his damages, without further proof, it is held, will be limited to such an amount as will fairly compensate him for the actual injury sustained. In order to recover punitive damages also, it is necessary for him to furnish evidence of express malice, or malice in fact, as distinguished from malice implied.

**Wants Clear Proof to Set Aside Will.**—Article 1489 of the Revised Civil Code of Louisiana provides that "Doctors of physic, or surgeons, who have professionally attended a person during the sickness of which he dies, can not receive any benefit from donations inter vivos or mortis causa, made in their favor by the sick person during that sickness," etc. Article 1491 declares: "Every disposition made in favor of a person incapable of receiving shall be null and void, whether it be disguised under the form of an onerous contract, or be made under the name of persons interposed. The father and mother, the children and descendants, and the husband or the wife, shall be reputed persons interposed." But the Supreme Court of Louisiana holds, in the case of the Succession of Bidwell, that an attack made upon a will, on the ground of incapacity of the legatees to receive the benefit of bequests therein, made because they are the wife and children of the doctor who professionally attended the testatrix during the sickness of which she died, and are therefore reputed to have been interposed for him, can not be sustained, in the absence of satisfactory evidence being administered that the will was made during that sickness. For example, it was admitted that the provisions of the Code above quoted were applicable to this case, the only question being whether the decedent's will was made during the sickness of which she died. The will was made in 1890, and her death occurred in 1897. The contention was that for a great number of years previous to the making of the will, and continuously thereafter up to the time of her death, she suffered from heart disease, which resulted in her death, and that consequently she made the will during the sickness of which she died. This latter was even certified by the physician to have been phlebitis and heart disease. Nevertheless, the court comes to the conclusion, after making a very careful analysis of the evidence, that phlebitis, ensuing from an attack of la grippe suffered about three months previously and not the chronic heart disease, was the sickness of which she died, and, such being the case, it holds that the will was not invalid under the Code.

# Current Medical Literature.

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Titles not marked with an asterisk (*) are noted below.

### New York Medical Journal, May 26.

1.—*Instruction of Hospital Corps, U. S. Army. William H. Wilson.
2.—*Septicemia Among Young Chickens. Leo F. Rettger.
3.—*Report of Case of Hematuria Due to Renal Carcinoma, with Endovesical Photographs. Frederic Bierhoff.
4.— Summer Plaster-of-Paris Jacket for Pott's Disease. R. T. Taylor. Smith H. McKim.
5.—*Application of Galvano-Cautery in Nose. Concluded.) Beaman Douglass.
6.—*General Characteristics of Ray Fungi and Their Relation to Certain Bacteria. Ludvig Hektoen.
7.—*Physical Training in School and Home. (Concluded.) Henry S. Pettit.
8.—*Dietetics of Convalescent Stage of Fevers. Adolph Rupp.
9.— Treatment of Anal Chancroids. Martin A. H. Thelberg.

### Philadelphia Medical Journal, May 26.

10.—*Rickets. John L. Morse.
11.— Hospitals for Insane and Study of Mental Diseases. (*To be continued.*) Stewart Paton.
12.—*Intestinal Indigestion and Its Consequences. (*Concluded.*) Wm. H. Porter.
13.—*Syphilis: Special Pathology and Reclining Rest-Treatment in Constitutional Stage. Samuel H. Friend.
14.— Friedreich's Disease with Report of Fatal Case. F. Savary Pearce. John M. Swan.
15.— Clinical Notes on Case of Paranoia. Albert W. Ferris.

### Medical Record (N. Y.), May 26.

16.—*Remarks on Some of the Conditions Simulating Appendicitis and Peri-appendicular Inflammation. E. G. Janeway.
17.—*Contribution to Treatment of Rupture of Parturient Womb—With Critical Review of Vaginal Operation. A. V. Wendel.
18.—*Loss of Hair; Clinical Study Founded on Three Hundred Private Cases. George T. Jackson.
19.— Cellular Specificity and Its Bearing on Neoplasms. B. H. Buxton.
20.—*Note on Treatment of Chronic Disease by Artificial Nauheim Baths. Abraham Mayer.

### Boston Medical and Surgical Journal, May 24.

21.— Some Thoughts of Medical Education. Frederick C. Shattuck.
22.—**Ideal Ration for Army in the Tropics.* (*Concluded.*) Edward L. Munson.
23.—*Ischemic Paralysis and Contracture of Muscles. Augustus Charles Bernays.

### Medical News (N. Y.), May 26.

24.—*Cystitis Papillomatosa. Frederic Bierhoff.
25.—*Medicinal and Non-Medicinal Remedies: With Points on Hydrotherapy, Diet and Massage in Certain Diseases Attended with High Temperature. Charles E. Page.
26.—*Organotherapy in Tabes and Other Nervous Diseases. Martin A. H. Thelberg.
27.—*New Method for Reroperitoneal Drainage of Pyosalpinx, with Report of Five Cases. Leon F. Garrigues.
28.— Inaugural Address. Edward D. Fisher.
29.— Three Cases of Subcutaneous Capillary Hemorrhage in Epilepsy. Charles J. Aldrich.

### Cincinnati Lancet-Clinic, May 26.

30.— "Our Students and Our Teaching." Joseph Ransohoff.
31.—*Sudden Death. Louis Schwab.

### Pediatrics (N.Y.), May 1.

32.— Report of Case of Chronic Valvular Endocarditis and Acute Nephritis, Following Chorea. John M. Swan.
33.—*Abatement of Dental Caries in Public School Children. Arthur DeVoe.
34.— Fracture of Upper Third of Left Femur in Infant. Robert T. Gillmore.
35.—*Present State of Our Knowledge of Action of Various Therapeutic Serums—With Some Remarks Concerning Use of Pane's Antipneumonic Serum in Children. Antonio Fanoni.
36.— Case of Amnesia. Philip F. Barbour.
37.— Case of Peliosis Rheumatica Caused by Traumatism. Louis Fischer.

### American Practitioner and News (Louisville, Ky.), April 15.

38.— Report of Some Cases of Foreign Bodies in Eye: Their Detection and Management. J. Morrison Ray.
39.— That Patient Who Is "Always With Us." Gifford Knox.

### Railway Surgeon (Chicago), May 1.

40.— Some Pets of a Country Doctor's Armamentarium. E. Steiger.
41.— Value of Manipulation in Some Surgical Conditions. Samuel Bell.
42.— Important Step Needed in Railroad Hygiene. R. F. Harper.

### Journal of Boston Society of Medical Sciences, April.

43.— Histology of Acute Lobal Pneumonia. Joseph H. Pratt.
44.—*Relation of Age, Physique and Preliminary Training to Class Rank in Pathology. George B. Magrath.
45.—*Report on Examination for Diphtheria Bacilli of Cultures From Four Hundred and Seventy-five Healthy Individuals. F. P. Denny.
46.— Case of Multiple Myeloma. James H. Wright.
47.— Additional Observation on Morphology of Digestive Tract of Cat. Franklin Dexter.
48.—*Few Experiments Upon Effect of Low Temperatures and Freezing of Typhoid Bacilli. Wm. H Pa.

### Indiana Medical Journal (I

49.— Treatment of Diseases of the St ) Alois B. Graham.

### American Journal of Insanity (Baltimore, Md.), April.

50.—*Epilepsy, Rickets and Lymphatic Constitution. A. P. Ohlmacher.
51.— Some Early Pathologic Changes in Ganglion Cells, with Report of Case. Maud B. Martin.
52.— Epilepsy with Retrograde Amnesia. Edward Cowles.
53.— Stigmata of Degeneration. Walter Channing.
54.— Revision of Insanity Law of Virginia. William Francis Drewry.
55.—*How to Deal with Insane. Edward C. Runge.
56.— Etiology of Progressive Paralysis. R. v. Krafft-Ebing.
57.—*Care of Recent Case of Insanity. C. B. Burr.
58.— Position of Study of Psychopathology in Pathological Department of Michigan State Asylums for Insane. Theo. Klingmann.
59.— Semiannual Critical Digest of Some of the Literature on Epilepsy. L. Pierce Clark.

### Cleveland Journal of Medicine, April.

60.—*Intussusception in Child of Seven Months; Operation and Recovery. F. S. Clark and F. E. Bunts.
61.— Treatment Preparatory for Parturition. O. T. Maynard.
62.— Current Thoughts on Etiology and Treatment of Pneumonia. T. H. Brannan.
63.—*New Growth of Tonsil—Syphilitic or Malignant? Howard S. Straight.
64.—*Primary Epithelioma of Tonsil. John M. Ingersoll.
65.— Comments of Eye-Testing in Cleveland Public Schools. Leigh K. Baker.
66.— Anastomosing Appendix. R. J. Wenner.

### Journal of Nervous and Mental Diseases (N.Y.), May.

67. Inaugural Address Before the American Neurological Association. Edward D. Fisher.
68. Tumor of Superior Parietal Convolution, Accurately Localized and Removed by Operation. Chas. K. Mills and W. W. Keen. With Pathologic Report on Nature of Growth. W. G. Spiller.
69.—*Case of Amaurotic Family Idiocy. Hugh T. Patrick.
70.—*Case of Amaurotic Family Idiocy. Sydney Kuh.
71.—*Appearances of Fundus Oculi. Chas. H. Beard.
72.— Raynaud's Disease in Insane. J. E. Courtney.
73.— Two Cases of Muscular Atrophy of Peroneal Type. Given Campbell.

### Journal of Medicine and Science (Portland, Me.), April.

74.— Cancer of Rectum in Female, with Report of Case. Wallace K. Oakes.
75.— Abortion, Its Cause and Treatment. C. W. Price.
76.— Observations on Obstetrics. J. B. O'Neil.
77.— Care of Eyes of New-Born. J. F. Hill.
78.— Climatic Treatment of Tuberculosis. George M. Randall.

### Journal of Medicine and Science (Portland, Me.), May.

79.— Relations of Ametropia to Affections of Eye and Nervous System. E. E. Holt.
80.— "Running" Ears of Childhood. Plea for Their More Careful Attention. H. T. Clough.
81.— Neurone. Wm. B. Small.
82.— Masso-Therapeutics. E. H. Judkins.
83.— Gunshot Wound of Abdomen with Recovery. H. B. Palmer.

### Ophthalmic Record (Chicago), May.

84.—*Spontaneous Luxation of Lens, and Zonular Cataract. M. F. Weymann.
85.— Foreign Body—Piece of Gunlock Imbedded in Frontal Sinus for Six and a Half Years—Removal. H. Bert Ellis.
86.—Fibers from Lamina Cribrosa Extending Out from Optic Disc Over Retina. Frank C. Todd.
87.— Hysterical Blindness with Report of a Case. George S. McReynolds.
88.—*Unusual Complication Occurring After an Operation for Orbital Lipoma. H. V. Würdemann.
89.— Simplified Method of Testing with Trial Prisms. Frederick H. Verhoeff.

### Canada Lancet (Toronto), April.

90. Splenectomy. Colin A. Campbell.
91.— Trephining and Neurectomy for Case of Infantile Palsy. J. T. Fotheringham.
92.— Case of Intestinal Perforation in Typhoid Fever. Operation. Death. G. N. Fish.
93.— Tinea Versicolor. N. E. Aronstam.

### Annals of Gynecology and Pediatry (Boston), May.

94.—*Vaginal Route. O. Beverly Campbell.

### Archives of Neurology and Psychopathology, Vol. II, Nos. 3 and 4, 1899.

95.—*Clinical Studies in Epilepsy. L. Pierce Clark.
96.— On Absorption of Proteids. P. A. Levene and I. Levin.
97.— Embryochemical Studies. P. A. Levene.
98.—*Sequence of Changes in Optic Chiasm Produced by Acromegalia, as Exemplified in Three Cases. Ward A. Holden.

### Interstate Medical Journal (St. Louis, Mo.), May.

99.—*Ischemic Paralysis and Contracture of Muscles. Augustus C. Bernays.
100.— Pathology of Pneumonia. Robert Luedeking.
101.— Facts of Inheritance. J. Arthur Thompson.
102.— Some Recent Eye Cases. James M. Ball.
103.— Analytic Diagnosis of Abdominal Tumors. Byron Robinson.
104.— Surgical Treatment of Inguinal Hernia, and Varicocele on Same Side. Robert E. Wilson.

### Medical Herald (St. Joseph, Mo.), May.

105.— Palliative Treatment of Carcinoma Uteri. Herman J. Boldt.
106.— Total Ciliectomy. M. F. Weymann.
107.— New Application of Undulating Current in Gynecology. G. Apostoli.

### Quarterly Journal of Inebriety (Hartford, Conn.), April.

108.—*Children of the Female Inebriate. Wm. C. Sullivan.
109.— Are the Uses of Tobacco Detrimental to Mankind? T. H. Marable.
110.— Morphinism. Louise C. Robinovitch.
111.— Alcohol and Alcoholism and Its Relations to Medical Profession. Charles Maefle.

### Pacific Medical Journal (San Francisco), May.

112.—*Few Practical Points in Management of Labor. Wm. J. G. Dawson.
113.— Early Diagnosis of Cancer of Stomach with Case. Frank Rattan.
114.— Gynecologic Electro-therapy. George Adam.

### Alabama Medical and Surgical Age (Birmingham), April.

115.— Legal Status of Medicine in Alabama. H. A. Moody.
116.— Hepatic Abscess. Mack Rogers.
117.— Peliosis Rheumatica and Report of Case. H. S. Ward.
118.— Hints of Obstetrical Management. C. C. Jones.
119.— Valedictory Address Before the Birmingham Medical College. Wm. W. Duncan.

### Chicago Medical Recorder, May.

120.—*Early Diagnosis of Pulmonary Tuberculosis. George W. Webster.
121.—*Varieties of Appendicitis and Importance of Their Recognition, in Furnishing the Indications for Proper Treatment. Wm. D. Middleton.
122.— Case of Chronic Suppuration Involving the Frontal, Maxillary, and Sphenoidal Sinuses on One Side of the Head, with no Complication. George E. Shambaugh.
123.—*Hot Air Treatment for Nervous and Joint Affections. Harold N. Moyer.
124.— Case of Double Cryptorchidism, Complicated with Scarlet Fever. Clinical History. Edward H. Ochsner.
125.— Case of Double Pyosalpinx with Intestinal Resection Jacob Frank.

### Medical Times (Philadelphia), May.

126.— Review of Potence and Impotence. Physiology, Pathology and Other Embarrassments of Procreative Powers. Review of Aphrodisiacs of Past and Present. Sexual Hygiene, in Married and Single Life, etc., etc., "Fecondite" (Zola) and "Krautzer Sonata" (Tolstoy). (Continued.) John J. Caldwell.
127.— Radical or Tentative Treatment of Piles. Thomas H. Manley.
128.— Etiology of Skin Diseases. W. R. Inge Dalton.
129.— Report of Case of Pott's Disease, with Wood-Plaster Jacket. Exhibited Before the Orthopedics Section of N. Y. Academy of Medicine. Edward A. Tracy.

### Medical and Surgical Monitor (Indianapolis), May 15.

130.— Pachymeningitis: Report of Case and Autopsy. Samuel E. Earp and John T. Scott.
131.— Intestinal Diseases of Children. William T. Newton.
132.— The Practitioner. W. H. Link.

### Canada Lancet (Toronto), May.

133.— Sick and Wounded in the War and How They Are Cared For. Wm. Nattress.
134.—*Case of Perforating Gastric Ulcer with Infection by Bacillus Aerogenes Capsulatus; with Synopsis of Literature on Infections by This Organism. Charles A. Page.
135.— Neurasthenia. D. Campbell Meyers.

### Kansas City Medical Record, May.

136.— Importance of Accurative Primary and Consecutive Examinations After Fracture. Thomas H. Manley.
137.— Cure of Old Sinuses. Herman E. Pearse.
138.— Chronic Endocarditis. H. Jerard.
139.— Removal of Foreign Bodies from Nose and Ear. Chas. E. Clark.

### Medical Examiner and Practitioner (N.Y.), May.

140.—*Diseases of Throat and Nose in Relation to Life Expectancy. W. E. Casselberry.
141.—*Early Diagnosis of Pulmonary Tuberculosis. George W. Webster.

### Charlotte Medical Journal, April.

142.— Pneumotherapy in Diseases of Respiratory Tract. James Sawyer.
143.— Malaria-Mosquito. J. A. Reagan.
144.— Treatment of Endometritis. J. D. Smith.
145.— Genital Hemorrhage. Wilmer Krusen.
146.— Employment of Douche after Labor. Frank C. Hammond.
147.— Puerperal Infection. C. H. Long.
148.—Treatment of Tuberculosis Based Upon Results from Previous Pathological Examinations of Blood Sputum and Urine of Patients. L. H. Warner.
149.— Financial Side of Practice of Medicine. W. J. Weaver.
150.— Consumption and Its Treatment. E. E. Liggett.
151.— Effects of Alcohol in Health and Disease. C. Teal.
152.— Fracture of Skull at Vertex, with Series of Cases. Clinton B. Herrick.

### Occidental Medical Times (San Francisco), May.

153.— Address Before the Medical Society of the State of California. George Chismore.
154.— Address Before the San Joaquin Valley Medical Society. E. C. Dunn.
155.—*Prevention and Treatment of Infectious Diseases of the Cornea. Wm. Ellery Briggs.
156.— Faulty Educational Methods as a Factor in Production of Insanity and Other Functional Neuroses. J. W. Robertson.
157.—*Injuries to the Eyes Due to Sunstroke. A. B. McKee.

### Medical Bulletin (Philadelphia), May.

158.— Pemphigus. John V. Shoemaker.
159.— Galvanism; Food Primer; Food Causation of Cataract; Cancer; Diabetes and Locomotor Ataxia. Ephraim Cutter and John A. Cutter.
160.— Two Complicated Breech Presentations. L. Napoleon Boston.

### Atlanta Journal-Record of Medicine, May.

161.— Climate of Porto Rico. Charles J. Proben.
162.—Four Cases of Penetrating Wounds of Abdomen with Visceral Lesions, and Wounds of Entrance Above the Umbilicus. Hugh M. Taylor.

163.— Fermentative Disorders of Alimentary Canal of Infants. L. G. Frazier.
164.— Address Before American Laryngological, Rhinological and Otological Society. J. A. Stucky.
165.— Medical Treatment of Inebriety. T. D. Crothers.
166.— Treatment of Inflammation. W. F. Church.

### Medical Sentinel (Portland, Ore.), May.

167.— Personal Experience with Puerperal Eclampsia. J. F. Watt.
168.—*Report of Case of Sulphonal Poisoning. Amelia Zeigler.

### Medical Times (N.Y.), May.

169.— Treatment of Pathologic Conditions of Female Generative Organs in Pelvis by Surgery per Vaginam. William H. Wathen.
170.— Catarrhal Pneumonia. W. N. Bryant.
171.— Modern Treatment of Scarlatina. F. P. Henry.
172.— Treatment of Acute Articular Rheumatism in Mount Sinai Hospital. L. A. S. Bodine.
173.—*Diseases of Larynx. Emma E. Musson.

### Austin Flint Medical Journal (Mason City, Iowa), May.

174.— Physiologic Rest as Therapeutic Measure in Certain Functional and Organic Nervous Diseases. C. Eugene Riggs.
175.— Tumors, Malignant and Benign. D. W. Finlayson.

## AMERICAN.

1. **Army Nurses' Instructions,**—Wilson gives an account of the training received by the United States Army hospital corps at Washington, D. C., and San Francisco. The men are selected because of their intelligence or former experience in nursing, and are drilled in the work of stretcher-bearers and hospital nurses. The instructions as to diet are given by a graduate female nurse. The results thus far have been extremely satisfactory.

2. **Septicemia in Chickens.**—Rettger describes an epidemic, occurring among young chickens two or three weeks old, which was due to a bacillus found in the blood, an actively mobile, non-liquefying, non-chromogenic, aerobic, and facultative anaerobic bacillus with slightly rounded ends. Grown on agar it is 2 microns in length, .03 to .05 micron broad, and usually occurs single. In bouillon the size may vary. It is non-spore-producing. On agar plates small white colonies appear in twenty-four hours. On potato the development is very slow. The bacillus does not produce indol, phenol, nor cresol. Its maximum temperature (moist) is 55 to 57 C. for the exposure of fifteen minutes, its optimum temperature is 35 to 37 C. The action of the more common disinfectants is as follows: A solution of corrosive sublimate, 1 to 60,000, kills it in two hours; one of carbolic acid, 1 to 220, kills it in two hours; solution of carbolic acid, 2.5 per cent. and soft soap, 1.5 per cent., 1 to 6, kills it in two hours. Inoculation experiments produce the disease, which is undoubtedly a sort of septicemia and apparently does not attack grown chickens.

3. **Hematuria.**—Bierhoff reports a case due to carcinoma, discovered by the cystoscope, which illustrates the unreliability of physical symptoms in the determination of the source of bleeding in vesical hemorrhage, and the value of the cystoscope for this purpose, as well as the freedom from danger when it is properly employed.

5. **Galvanocautery of the Nose.**—Douglas continues his article on the application of the galvanocautery to the nose. He shows the danger from partial destruction of tissue, leaving an uncauterized center which may produce septic processes, and mentions the importance of using such an electrode as will entirely destroy the slough. He cautions against the use of the cautery for such regions as the uvula, the faucial pillar, arytenoid region, glosso-epiglottic fold, pyriform sinus, and the region of the chorda muscularis, as an edema may be started which will be a serious matter. After complete healing, the structural changes caused by cauterization are the replacement of the physiologic tissue by means of connective tissue. He lays down as the first general indications that it be used on soft tissues and not on hard forms, such as cartilage, periosteum and bony structures. It will accomplish its best results on tissues composed of round cells and will not act so favorably on connective tissue. It is best used on tissue where the bloodvessels are to be destroyed, those that are the seat of chronic congestion rather than those which have gone on to a subsequent marked hypertrophy or a polypoid form of inflammation. He does not believe in treating the nasal septum, excepting the erectile tissue at the tuberculum septi in the upper half where it is the seat of vascular engorgement. In the turbinated bodies, it is limited to cauterization of hypertrophic masses in special localities and under particular conditions. The best results are obtained when the hypertrophy is accompanied by congestion and distension of the erectile tissue. On hypertrophied posterior tips which contract well under cocain, the cautery is especially indicated. The particular turbinated localities where it is safe to use the cautery are the inner and under surfaces of the inferior turbinate together with its inner and posterior ends, also the posterior ends of the middle turbinated, and sometimes the flabby hypertrophy of the anterior tip of the middle turbinated body, if an examination proves that it does not contain an accessory anterior ethmoidal cell. The cautery should never be used with polyps and it is not advisable in nasal hemorrhage except where it is non-surgical. In nasal ulcerations, if non-syphilitic or non-malignant, it may be used to stimulate healing, but must be used repeatedly and always at periods of about two weeks. It should never be used with malignant growths. In round-celled structures which are hypertrophied, such as adenoids, hypertrophied tonsils, enlargement of the lingual follicles at the base of the tongue, follicular pharyngitis and cellular infiltration in laryngeal tissue, it produces its most brilliant results without danger.

6. **The Ray Fungi.**—Hektoen gives a full description of the ray fungi according to the lights of modern literature, and discusses the question as to their relation to certain bacteria, especially those of tuberculosis and diphtheria. He finds that the usual designations—bacillus, bacteria, and bacteriologic—are not adequate to represent correctly and scientifically the exact situation, as has been emphasized by Hueppe.

7. **Physical Training in School and Home.**—Pettit concludes his article with a description of the methods of the Adelphi College, and urges the use of proper training begun early. It is important to teach the parents as to the necessity of the case.

8. **Dietetics of Convalescent Stage of Fevers.**—The nutrition of the convalescence following the febrile state is discussed by Rupp, who notices the value of carbohydrates and vegetable foods, and the necessity of paying attention to the tastes of the individual patients. Other particulars noticed were the regulation of the temperature, the baths, massage, electricity and the physician's advice as to alcoholic and sexual indulgence.

10. **Rickets.**—Morse's article describes the conditions of rickets, with their characteristic skeletal and muscular changes, and skin, glandular, respiratory and circulatory disturbances, etc. He considers improper food the most important etiologic factor, though hygienic conditions are not underestimated. As regards life, the prognosis is good. The treatment should be largely dietetic, low in carbohydrates, and high in fats and proteids, and the high fats are especially important, the best form being that found in milk. When the digestion will stand it, cod-liver oil should be given and the child should have the greatest possible amount of fresh air and sunshine. If a change of climate is possible the seashore is preferable to the country. Salt baths, massage and rubbing are useful. While there is no specific for rickets, phosphorus has been strongly recommended, but he himself has seen no benefit from its use. The anemia is best treated by iron. Symptoms and complications should receive proper treatment as they arrive. The best plan to prevent deformity is to discourage the formation; to keep the child from sitting up, standing or walking while the bones are yet soft. Postural treatment will do something for deformities of the spine, and manipulation for those of the extremities. Mechanical treatment is of little use after the child is over 2 or 2½ years of age. Many slight deformities, however, disappear with growth.

12. **Intestinal Indigestion.**—Porter continues his article on intestinal indigestion by first showing that the stomach is not primarily affected, though it may be difficult to exclude it in chronic cases. The liver is inactive; the diarrhea is more or less irritating; indican and excessive uric acid are the two most common urinary symptoms, the excess of acid producing bladder irritation. The constant absorption of toxic compounds from the alimentary canal causes liver distu [illegible] the central nervous system is poorly nourished [illegible] irr

tated. Hence there may be various cerebral symptoms, headache, insomnia and mental disturbances. The nonparasitic skin affections are in a large measure only the symptoms of intestinal indigestion. He has found a pronounced degeneration of the cardiac muscle present in a number of cases. The prognosis of these troubles is good if they are recognized early. The principal thing in the treatment is regulation of the diet, and the tastes of the patient can not be considered in this, as in many instances it is necessary for it to be limited to two or three articles of food, such as milk, barley gruel or broth. The patients may think they are getting worse, because of the loss of flesh while the process of normal digestion is being established. It may be necessary to cut out the fats or sugar of milk, and this may be accomplished in the former instance by ordering an exclusive skimmed-milk or buttermilk diet, and in the latter by ordering an exclusive diet of kumyss, zoolak, kefir or sumal, in which case a little alcohol is advisable to keep up the animal heat. It is an important point to know that all animal foodstuffs contain but little of lecithin and hemoglobin forming substances and that some form of vegetable food must be used in order to furnish enough nucleo-albumins. He excludes a number of things, however, that are often advised, such as cooked or raw fruits, sweets and pastry of all kinds, onions, turnips, parsnips, potatoes, carrots, celery, radishes, cabbage, egg and oyster plant, corn, etc., rich gravies and soups of all kinds, and gives a reason for each of these exclusions. The use of a little dilute hydrochloric acid may be of assistance to the digestion, and he also advises a few grains of inspissated oxgall three times a day before eating. When the liver is performing its functions abnormally and the tissues are stained with bile, mercurials are of value. Constipation should be met with some laxative that acts according to the normal plan of Nature. He advises strychnin and caffein for intensifying nerve-innervation.

13. **Syphilis.**—Friend concludes that, without regard to system, organ or tissues affected, and irrespective of the period of syphilitic infection, all specific lesions begin in the arteries; that the special pathology of syphilis is in a disease of the arterial walls, and that this disease bears the same relation to syphilis as does the affection of Peyer's glands in the intestine to typhoid fever; the disease of the skin in smallpox, etc. On the basis of this theory, he thinks that "reclining rest" is the proper routine treatment during the first part of the constitutional stage of this disease, as the ambulatory treatment produces aggravation of arterial symptoms.

16. **Conditions Simulating Appendicitis.**—Among these, Janeway recognizes neuralgia, affecting the lower abdominal nerves of the right side, and certain conditions of the kidney, such as renal colic, intermittent hydronephrosis and movable kidney. Cholecystitis also has been found as a cause of the trouble, and certain conditions in the intestinal tract, such as ulceration or narrowing of the hepatic flexure of the colon. Typhoid fever complications have led to an operation for appendicitis, as have also those connected with follicular tonsillitis. Still other conditions mentioned are abscess of the ovary, retained menstrual fluid, retroperitoneal abscess and hypochondria.

17. **Rupture of the Uterus.**—Wendel remarks that rupture of the uterus is considered a very rare accident, but it probably occurs much more commonly than is supposed. He reports several cases and considers the methods for its prevention. His résumé is that in threatened rupture, delivery should be accomplished at once by the method which does not increase the excessive intrauterine tension, and delivery by the natural passages is permitted only if it does not aggravate the existing injury. If the true conjugate diameter measures less than 8 cm., a completely intraperitoneal fetus should be delivered by abdominal section, but if it exceeds this, the uterus should be removed by vaginal hysterectomy and the child delivered by the feet in the natural way. If the child is alive after the death of the mother, post-mortem section should be performed. The uterine tamponade is useful only as a dressing to prevent intestinal prolapse, or to retain reposited loops of intestine within the abdomen until the case can be operated on. Conservative surgery risks subsequent rupture and should not be chosen unless it is expressly desired by the patient or immediate relatives. Vaginal suture is objectionable from the possibility of overlooking the bleeding arteries in the parametrium. When laparotomy is required, the uterus is to be removed by supravaginal amputation with extra- or intra-peritoneal treatment of the stump according to the needs of the case or the ability of the operator. Vaginal hysterectomy is the elective procedure in all cases. It should be supplemented by abdominal section whenever necessary.

18. **Loss of Hair.**—From a study of 300 cases which are analyzed, Jackson concludes that loss of hair is more common in men than in women, and in married than unmarried people. He believes that the majority of those losing their hair, follow indoor occupations, which associated with worry or nerve strain, is a predisposing, if not the determining, cause of baldness. The great majority of cases begin before the 30th year. In women the loss of hair takes the form of general thinning, while in men the whole top of the head is commonly affected. As to the cause outside of febrile disease, he thinks heredity is first, and dandruff one of the most common exciting causes. In absolute baldness when the scalp is atrophied and bound down there is little use in trying to do anything. Massage is one of the best methods of stimulating the scalp, and this is done best by a skilful masseur, but the patient can do much by pinching up the scalp between the ends of the fingers. His own method of treatment is attention to the general condition of the patient. When this is good, the patient is given a little sulphur ointment with the directions to use it once a day for three days and then wash the hair and scalp. Immediately after this the hair is dried and an ointment is applied and repeated every other day for ten days. The scalp is then washed again and the ointment continued two or three times a week until the dandruff is controlled, the washing being repeated from time to time. If the patient will not use ointment his resort is to a lotion of resorcin, at first 3 and afterward 5 and 10 per cent. strength, morning and night. If the sulphur is used in the form of what his druggists calls "sulphur cream," it is not so troublesome, being used but twice a week or so. In cases of loss of hair without any apparent trouble with the scalp, massage is the best treatment.

20. **Artificial Nauheim Baths.**—Mayer describes his method of making artificial Nauheim baths with acid sulphate sodium and bicarbonate of sodium. He uses six or eight cakes, two ounces each, of the former, and two pounds of the latter to the bath; or the saline mixture of sodium chlorid, 30 pounds, potassium chlorid, 10 ounces; granular calcium chlorid, 30 ounces; magnesium chlorid, 8 ounces, thoroughly mixed and kept in a moist-proof tin box until needed. He first uses 3 pounds of the above with bicarbonate until it is thoroughly effervescing. He relates his own experience with the baths, and thinks the artificial like the natural ones, together with the resisting exercises, are the most efficacious and lasting remedy for chronic disease of the heart.

22. **Army Ration in the Tropics.**—In his concluding article, Munson says that fats are needed less in the tropics, and that over-stimulation of the liver is a result of their ingestion to an undue extent. The ratio of fats to carbohydrates must be reduced from about 1 to 5.5 to 1 to 10 at least. The ingestion of carbohydrates in a greater quantity than is required is much less injurious than an excess of proteids or fats, though it also has its disadvantages. He does not, however, believe in a very great reduction and would allow about 380 grains of carbon not including the carbon required in the formation of urea, for energy. He publishes several tables of dietaries suitable for active and garrison duty, the mean of which gives carbon 358 grams and the proportion of nitrogen to carbon 1 to 20. The rotation of these diets, which is given in detail, would probably meet all the indications as they arise. The changes that are advisable are made chiefly in the line of reduction in the quantity of food; sugar and starches only being slightly augmented, but their increase is small compared with the considerable reduction of nitrogen and fatty material. Many of the components of the present ration require no change, being not only admirably selected, but also properly

proportioned. See also abstract in The Journal of June 2, ¶ 1, p. 1435.

23.—This article has appeared elsewhere; see abstract in The Journal of June 2, ¶ 100, p. 1439; also see title 99, in this issue.

24. **Cystitis Papillomatosa.**—This condition is a form of cystitis, characterized by the usual symptoms of either catarrhal or suppurative forms—frequency of urination with more or less pain and tenesmus, the urine passed being clear or turbid, as bleeding does not occur spontaneously. The seat of the disorder is at the trigone, which it usually covers, and it may involve the urethra. Its villi, or papillæ, spring from an inflamed base and are discrete. When in doubt as to the condition, Bierhoff uses the ureter cystoscope, armed with a catheter, which is laid on the inflamed surface; the window of the ureter cystoscope lying directly over and close to it, the catheter will at once sink into the mass of papillæ or pass between them if this condition exists. He reports several cases and discusses the differential diagnosis; the treatment is merely mentioned.

25. **Medicinal and Non-Medicinal Remedies.**—Page alludes to the tendency to overtreat disease, and thinks there is too much said about the treatment with drugs alone and that we should lay special stress on other methods. If he were restricted to only one method he would adopt hydrotherapy for the treatment of all diseases, and drugs alone would be his last choice. He says it is a fault of our medical education that we give so little attention to hydrotherapy and massage, and that these are in their way even more important therapeutically than drugs.

26. **Organotherapy.**—Thelberg remarks on the theories of organtherapy, with special reference to testicular extent. He notices briefly some of the literature and describes two cases, one of tabes and one of paralysis agitans, in which spermin appeared to have a very good effect.

27.—See abstract in The Journal of February 10, p. 361.

31. **Sudden Death.**—The conditions of sudden death are noticed by Schwab, who says he is inclined to follow Brouardel in his opinion that toxins from disordered kidneys are more important in this regard than heart disease, which is so commonly given as the cause, especially in alcoholic cases. Sometimes a slight trauma may be the cause, and there may be unrecognized conditions of great gravity during life which will account for the unexplained fatalities in operations and under other circumstances.

33. **Dental Caries in Children.**—DeVoe urges more care on the part of the physician as to this matter. He believes that medical inspection of schools should practically include attention to the children's teeth.

35. **Therapeutic Serums.**—Fanoni has used Pane's antipneumonic serum in eighteen cases of pneumonia, four of which were in children under 3 years of age. The serum, when injected early enough and in sufficient quantity, if not deteriorated by age, quickly produces a lowering of the temperature and improvement and hastens resolution. The quantity used by him is 40 c.c. of No. 2 daily. He has used Marmorek's serum with partial success in two cases of puerperal infection. Another that he has found of value is Maragliano's antituberculous serum, which he used in his private practice and thinks is the only scientific remedy we possess for the treatment of this disease. It will give valuable help in incipient cases where there is no mixed infection. Patients, after its use, sometimes become immune to very large doses of tuberculin—ten times more than the initial dose ordinarily given.

44. **Relation of Age, Physique and Preliminary Training to Class Rank in Medical Students.**—McGrath has examined the students of Harvard Medical College to ascertain the standing in scholarship according to age, weight and preliminary training. He found that students varying widely in the grade of scholarship present no marked difference in weight, though the lower grades average slightly heavier than the others, but vary widely in age and preparation. Students differing widely in age differ little in weight, and to a great extent in preparation and ability in scholarship. Those varying to a marked degree in weight show little difference in scholarship or preparation. The most important factor in the the scholarship appears to be the preliminary training and, to some extent, the age.

45. **Diphtheria Bacilli in Healthy Individuals.**—In cultures from the mouths of 285 healthy individuals at the Brookline Board of Health's laboratory there were found but 7 with the bacillus of diphtheria, 4 of these were adults who had some connection or association with an epidemic of diphtheria, and the other 3 were school children, 2 of these from a class where there had been a slight outbreak, and the other from a child who had no known connection with any case of diphtheria. All of these individuals were perfectly healthy. In 190 healthy boys in a municipal school for truants there had been a slight epidemic involving 10 of the pupils just before the cultures were made, and in 16 of these the diphtheria bacilli were found. The conclusions of the whole research are summed up by Denny as follows: Diphtheria bacilli are seldom found—except where there has been great exposure—in the throats of healthy individuals, living under good hygienic conditions. A large number of persons may be infected by healthy individuals who have the bacilli in their throats. The condition of institute-life, which favors the growth of virulent bacilli in healthy throats is the living together of a large number of persons in a limited airspace.

48. **Influence of Cold on Typhoid Bacilli.**—Prudden had shown that water in freezing becomes partially purified, and more recently Sedgwick pointed out that this purification excludes nearly 90 per cent. of the bacilli. Prudden found in one week that 80 per cent. of the typhoid bacilli were killed in frozen water; in ten weeks, 9 per cent.; and in fifteen weeks, 99.9 per cent. About 99 per cent. were killed in two weeks with repeated freezing and thawing. Park has repeated Prudden and Sedgwick's experiments and found that in one-half of a week, 42 per cent. were left; in one week, 14 per cent.; in two weeks 7.5 per cent.; in three weeks .4 per cent.; in five weeks, .11 per cent.; and in twelve weeks only .05 per cent. He has not as yet carried his experiments beyond twelve weeks, and can not say when all living bacilli would cease to exist in the specimens of ice from the most resisting cultures. In twelve weeks the bacilli in the ice from 9 sources were all dead. No one of the twenty cultures made were more resistant than Prudden's test culture. When typhoid bacilli are in feces, freezing does not have so much effect. Thus typhoid and colon bacilli, originally 37,000 to a loopful of feces, were still 12,000 at the end of five weeks' exposure to a temperature ranging daily between zero and 28 F. Fecal material from typhoid patients that is thrown out without disinfection in winter and frozen might easily stay infected until spring and the bacilli be carried a considerable distance after thawing. It is a difficult matter to say how long ice from infected water remains dangerous, and Park thinks we should discourage its use from possible infected waters unless it has been frozen for at least five months. After midsummer, he thinks we could rule out ice infection almost absolutely. He made an experiment to see the effect of low temperatures, which he thinks has been somewhat exaggerated. Ten tubes containing 10 specimens of ice infected with typhoid bacilli from different sources, after being frozen two weeks, were put in an ice-box at 52 F. for two weeks, and 10 duplicate tubes were left at 10 to 20 degrees. There were less left living at the end of seven weeks of those at 52 than in those left frozen at 10 to 20 degrees. Again, typhoid bacilli placed in liquid air for three hours showed a large percentage still living. At a temperature of 70 F. typhoid bacilli in filtered water frequently held their own or increased for a few days and, at the end of five weeks, 2 out of 10 cultures still contained 50 per cent. of their number. He was not able to confirm Prudden's experiments showing that dry cold is less injurious than moist cold.

50.—See editorial in The Journal of May 26, p. 1348.

55. **How to Deal with the Insane.**—Runge's paper discusses a number of subjects, including the detention in asylums, which he says is not a hardship for the majority of those thus confined. He also states that he has never found cases of illegal detention. The incompetence of jurors who sit on cases of insanity is also referred to, as well as the well-worn subject of medical expert testimony, and the present methods condemned.

57. **Care of Recent Cases of Insanity.**—According to Burr, the hospital treatment of recent cases of insanity by rest in bed and constant attendance of a trained nurse is most advisable. Friends and relatives should be excluded, as a rule. Special attention should be given to excretions, more particularly those of the bowels. The application of ice-caps and cold packs may be of use, but he has had little experience with the latter, though it was of distinct service in a case of mania. He condemns remedies directed to subduing the patient, as it is not curative to restrain the activity by means of drugs. Sleep should be secured, if possible without drugs, but if necessary, hydrate of chloral or other hypnotics may be employed. He does not exclude the use of exercise by the bed treatment, and thinks that tonic remedies are advisable, as are also stimulants in the exhaustive conditions. He has never had much confidence in cannabis indica in the depressed states, and for various reasons never prescribes opiates. Electricity, in the form of electric massage, is especially mentioned, and also what he calls "the salt glow," which consists in a sort of salt bath with rubbing. Special directions are given as to diet and methods to induce patients to eat. Artificial feeding may be employed as a final resource, but special care should be taken to avoid accidents. He does not advise change of scene for the neurasthenic and depressed patients; travel has a very narrow range of usefulness.

60.—See abstract in THE JOURNAL of March 10, p. 623.

63.—See abstract in THE JOURNAL of March 24, p. 749.

64.—Ibid., April 21, p. 1005.

69 and 70. **Amaurotic Family Idiocy.**—Patrick reports a case of amaurotic family idiocy, which is of interest because it did not occur in a Jew, as is usually the rule. Another case is reported by Kuh, who thinks that the conditions indicate something more than simple arrest of development; there appears to be a distinctly retrogressive and destructive change.

71. **The Fundus Oculi in Amaurotic Idiocy.**—This, as described by Beard, is characteristic and unique. The disc is unusually clear, though there is no pronounced atrophy of the optic nerves, but the really characteristic features observed are around the yellow spot which is the center of a liver-colored disc. This is surrounded by a zone of grayish white, which extends for at least two disc diameters, horizontally and somewhat less vertically, gradually fading away into the normal red-orange of the eye ground. The livid disc is clear-cut and distinct, is larger than the fovea, marking all that space which is devoid of the ganglion cells. Another more distinguishing feature is the character of the white zone surrounding the center, which is nearly white at the circumference of the liver-colored disc, then gradually thins away to nothing.

84. **Luxation of Lens and Zonular Cataract.**—Weyman, from his observation and experience, concludes that in the vast majority of cases spontaneous lenticular dislocation is due to the same causes that produce zonular cataract. Zonular cataractous degeneration is only one of the congenital defects—myopia, weakness of the zonula of Zinn, etc. All or most of these may be present when the cataract is lacking and the spontaneous luxation of the lens surrounded by its capsule does not, of necessity, nor usually, develop a cloudy zone. If such is found, it should not be attributed to the dislocation for a lens disturbed in its trophic relations usually degenerates locally at the point of capsular injury or irritation, or totally. Riordon and Jaeger have reported cases of capsular dislocation retaining perfect transparency for many years after. Luxation into the anterior chamber should be attended to at once as it is likely to cause injury to the cornea and iritis. Though extraction is the ideal proceeding, it should be abandoned in favor of reduction into the vitreous in the presence of the following conditions: 1. When the other eye is practically unserviceable and the extraction unduly dangerous. 2. When the lens has, without irritation, before resided back of the pupil. With a loose iris, he believes discission the best and safest plan.

88. **Unusual Complications Following Operation for Orbital Lipoma.**—Würdemann reports a case in which, after removal of the orbital lipoma, there was total traumatic ophthalmoplegia externa, with partial atrophy of the optic nerve, due to pressure of a hematoma of the orbit following operation.

94. **Vaginal Route for Pelvic Operations.**—As to the method of operating in pelvic disorders, Campbell prefers the vaginal route in most cases and suggests a modification of Trendelenburg's position as of advantage in this. In the ordinary position, the possibility of infection of the abdomen from drippings from the pelvis is to be considered. He, therefore, has arranged that after the patient has been in the Trendelenburg position and remained there eight or ten minutes, she is then drawn six inches higher on the table, the pelvis now resting on a level plane six inches wide. The intestines will have gravitated before the patient was moved, and in the modified position the operator works downward in the pelvis and the pus is more easily removed, with less danger of its gaining entrance to the peritoneal cavity.

95. **Studies in Epilepsy.**—*Exhaustion-Paralysis in Epilepsy*—By this Clark means that occurring as a result of convulsive attacks. He reviews the literature thoroughly and gives his personal observations, concluding: 1. The theory of exhaustion-paralysis is conclusively proved by physiologic experimentation and especially by pathologic data derived from the observation of phenomena in epilepsy. 2. Exhaustion-paralysis is localized to parts participating in the local spasms, or confined to those parts most convulsed in general seizures. Although there may appear to be exceptions to this general rule, such cases will always be found to follow it, if carefully observed. 3. The temporary paralysis may become permanent and exists as a true hemiplegia with organic changes of a varied nature. 4. It is not necessary to invoke any other state than exhaustion to explain the temporary paralysis in epilepsy. 5. Temporary exhaustion-paralysis is essentially an exhaustion of cerebral centers, and the apparent severity of muscular convulsions is not a fair index to the amount of paralysis that may follow. 6. True exhaustion cases independent of infantile palsy affections are not common. The differential diagnosis of the two lesions or states is extremely difficult but most important, because the exhaustion cases, independent of organic lesions, help to bridge over the wide breach existing between so-called Jacksonian epilepsy and idiopathic epilepsy. 7. Researches on the disorders of motility, which partake of the nature of exhaustive phenomena following convulsions, as seen in epileptics, seem to suggest some noteworthy points; among them, that the degenerative process of exhaustion-paralysis, as manifested in epilepsy, is closely allied to that of ordinary paralytic states. Due allowance should be made for the fact that the epileptic brain is, in the majority of cases, much incapacitated. We should not charge to the epileptic as a cause more than that which may be due to previous disability of the motor centers. He alludes to the suggestion of epileptic paralytic foci in the brain and supports it by the fact of the localized auras and the minute patches of softening or sclerosis so often found. He calls attention to the inadequacy of treatment by passive movement or massage in epileptic paralysis. *Paramyoclonus Multiplex and Epilepsy.*—Clark's second paper reports a case with a discussion of the literature of paramyclonus, which he thinks is the only one thus associated that has been reported by English or American observers. He considers it rather surprising that we do not see this condition more frequently associated with epilepsy. *Hypertrophic Infantile Cerebral Palsy and Epilepsy.*—He also reports two cases of infantile cerebral palsy and phocomelus, and rejects the theory of athetosis causing the condition, though he offers none to take its place.

98. **Changes in the Optic Chiasm Produced by Acromegalia.**—Holden describes the results of the examinations of three cases of distorted chiasm in acromegaly, and notes the

gross changes that may occur in this condition as follows: The posterior portion of the chiasm is compressed by the pituitary body. Following this, the posterior and middle portions of the chiasm are flattened and forced upward, and thus separated from the anterior portion, which is protected by the bone beneath it. Later, with this tilting upward of the chiasm posteriorly and the forcing forward of the anterior wall of the pituitary fossa, the anterior portion of the chiasm is encroached on by the pituitary body and arched directly forward. Finally the chiasm may be severed completely. He has studied the atrophy of the optic nerves in these cases and points out the changes which should occur in the visual field. In the cases of acromegaly in the literature, visual disturbance has been noted in about one-half of them and in the other 50 per cent. there has been concentric contraction of the visual field with diminution of central acuteness of vision, and in somewhat less than one-half, bitemporal hemianopsia, absolute or for colors only, with or without some contraction of the nasal halves of the field; in six cases there has been homonymous hemianopsia, absolute or for colors, only, and in one case there was found binasal hemianopsia. The type of the contraction of the field may change with enlargement of the pituitary body. Homonymous hemianopsia from pressure on one tract will become complete with involvement of the chiasm, and the bitemporal hemianopsia may also lose the nasal field in a similar way. The visual disturbances in acromegaly usually appear late in the disease though there is no rule as to their course.

99.—See ¶ 23, above.

108. **Children of the Female Inebriate.**—From a study of the subject, Sullivan concludes that maternal inebriety is a condition peculiarly noxious to the normal development of the offspring. While its influences, measured by the test of infant mortality, are to a considerable extent through deterioration of the *milieu*, in a large number of cases it also depends on the primary action of the poison. The reality of this last is shown by the tendency to still-births and abortions, by the frequency of epilepsy in the surviving children, by the prevalent mode of death and by the effects of modifications of the intoxication. This primary action of alcohol is due, in part, to the effects of the poison on the maternal organisms; and, in part, to a direct toxic action on the embryo from excesses during pregnancy. The first of these modes is, by its nature, permanent with a tendency to increase; the second, while also tending to increase, is susceptible of modification. The tendency of the family with alcohol maternity is toward a type the inverse of the syphilitic family, thus the first-born children are normal, then come more or less defective ones who live beyond infancy, then those dying in infancy, and lastly still-births and abortions. The deviations from this type are probably due to oscillations in the tendency of the second mode of influence.

112.—See abstract in THE JOURNAL of May 5, p. 1129.

120.—See abstract in THE JOURNAL of May 12, p. 1195.

121. **Varieties of Appendicitis.**—Middleton divides cases of appendicitis into: 1. Catarrhal conditions confined practically to mild attacks which pass into a chronic form or into the secondary class. 2. The suppurative cases. 3. The perforative one, which is simply the continuation of the suppurative. 4. One that he calls the gangrenous form, which is proportionately rare and includes many of the fulminant cases. The chronic form is the condition associated with recurrent attacks. He believes operative interference the best method of managing these cases.

123. **Hot-Air Treatment.**—Moyer found the hot-air treatment of value in a number of nervous and joint affections. The apparatus as made in this country has not been satisfactory and he had one made to suit himself, which was readily and simply constructed of ordinary galvanized iron. The most useful temperature he found to be 350 F.; lower than this he did not get any of the alterative effects which are the chief characteristics of the treatment. The idiosyncrasy must be regarded, as some persons burn easily even with comparatively low temperatures. In a number of cases of joint trouble following rheumatism, traumatisms and chronic synovitis with adhesions in the joint, the results were exceedingly satisfactory but not much benefit was derived in arthritis deformans. He thinks the value of this treatment is most marked in those cases of peripheral neuritis accompanied with joint lesions, and that it will be of advantage in many cases of sciatica accompanied with the so-called bloodless stretching of the sciatic nerve.

134. **Bacillus Aerogenes Capsulatus.**—Page reports a case of perforating gastric ulcer with infection by this germ and discusses the literature of the subject. He thinks that it is probably a constant inhabitant of the alimentary tract and, in conditions of lowered resistance may produce serious trouble.

140.—See abstract in THE JOURNAL of May 12, p. 1194.

141.—See abstract in THE JOURNAL of May 12, p. 1195.

155. **Infectious Diseases of the Cornea.**—The practical points of Briggs' paper are brought out in the following: 1. All corneal infection, in the absence of constitutional disease, comes from without and gains entrance through some lesion of the epithelium. Every corneal wound should therefore be thoroughly cleansed with a mild antiseptic solution and an antiseptic compress applied. 2. Injuries of the cornea are especially dangerous in the presence of suppurative disease of the conjunctiva or lacrimal sac. Active measures must at once be taken to render the wound antiseptic and to prevent new infection. 3. When infection of a corneal wound has become established the active focus should be treated with stronger antiseptics. In grave cases the galvanocautery offers the most efficient means. 4. When patients complain of having "taken cold" in the eye, that organ should be carefully examined for foreign bodies and corneal abrasions, the most minute being readily detected by the introduction of fluorescein solution. Sulphate of zinc or other irritants should never be prescribed until the existence of a wound has been positively excluded.

157. **Eye Injuries Due to Sunstroke.**—McKee reports two cases of central scotoma, due to sunstroke associated with photophobia and pains. The pathologic conditions did not correspond to the severity of the symptom.

168. **Sulphonal Poisoning.**—Zeigler reports a case of a girl who took, as nearly as can be estimated, about 125 grains of sulphonal at one dose, at 10:30 p.m., April 27, and was seen the next morning, but, knowing that she had taken a hypnotic, was not disturbed until 11:30 p.m., when she again fell asleep and could not be awakened until 11 o'clock the next morning. When momentarily aroused, her mind was in a confused conditions, frequency of respirations and pulse increasing, and anesthesia became complete, until finally artificial respiration was required. She was given strychnin, 1/50 gr., every three hours, and later, glonoin, 1/250 gr., two doses altogether. At 7:30 a.m., April 30, the third day after taking the dose, she awoke naturally, and while there was some ataxia for a short time she seemed completely well on the third day of her convalescence. The urine was scanty through the entire period, averaging but four ounces during the twenty-four hours, its specific gravity ranging from 1028 to 1034; no albumin; no sugar. Nourishment was given her by enemas during the three days of her trouble.

172.—See abstract in THE JOURNAL of April 14, p. 934.

## FOREIGN.

### British Medical Journal, May 19.

**Small-Bore Rifle Bullet Wound and the "Humanity" of the Present War.** CLINTON T. DENT.—The writer reviews the experience of the present war in the Transvaal, and claims that the "humanity" of modern war must be tested by the question whether such septic disorders as pyemia, septicemia, gangrene, erysipelas, etc., are present or absent. These are preventable and thus far in the Transvaal War he has not seen them. He specially praises the commissariat and transport, but admits that the climate has been the strongest point in favor of the English in this war. Pure sunlight and air have done more for the wounded in this war than seems to be generally acknowledged, and if too much is trusted to this experience there may be a terrible awakening when a war has to be carried on under more unfavorable surroundings.

**Plague in the Lower Animals.** Frank G. Clemow.—The author finds that while dogs are probably liable to plague under natural conditions, they have not yet been proved to play much part in its spread. In inoculation cases they are found quite refractory. Cats fall under the same general head as dogs in this respect. They are very slightly susceptible either in nature or in the laboratory, and can not be considered as assisting in the spread of the disease. In view of their fondness for rats it is fortunate that this is the case. Jackals are said in China to contract plague, but positive proof seems to be wanting. Of the Ungulata, the horse appears to escape infection under the natural conditions; this being the animal employed in the preparation of curative plague serum, the symptoms produced by inoculation have been thoroughly described. It would seem that pigs have a low susceptibility to the virus, but are probably of little importance as agents in spreading the plague. The same may be said of sheep. Goats seem to be somewhat more susceptible and there has been an increased mortality among them in Bombay during the epidemic. Cattle are scarcely at all susceptible and play no part in the multiplication of the disorder. Birds are refractory. It can hardly be seriously claimed that plague is spread by any members of the group of reptiles or fishes. The only invertebrates observed or believed to carry the infection are insects, but whether their agency is as important as some have claimed must for the present be considered open to doubt.

### The Lancet, May 19.

**Modern Treatment of Diabetes Mellitus.** Robert Saundby.—Under normal conditions the liver stores up in the form of glycogen, carbohydrate material, taken into the body as food, and by means of its regulating mechanism converts this into sugar and passes it into the circulation in such quantities as needed. Under abnormal conditions, the liver no longer stores up glycogen, but allows the whole of the carbohydrate food to pass at once into the circulation as sugar, while any stored glycogen is at once converted and discharged. These abnormal conditions may be produced by certain traumatisms, shock, etc., especially by the puncture of the fourth ventricle, Claude Bernard's noted experiment. These facts, however, do not explain the pathology of diabetes, the disease in which the excretion of sugar goes on often without regard to the ingestion of carbohydrates or the amount of glycogen stored. Pavy has shown that the albuminous molecule splits off into a carbohydrate molecule from which sugar has formed, thus partially explaining the above fact, but we have to still postulate a further failure of the sugar-destroying function of the tissues in diabetes. It appears, therefore, that under interference of certain agencies the liver loses its power of storing up glycogen, the tissues, therefore, gorged with sugar, lose their power to consume that substance and glycosuria results. In the pathogenesis the nervous system undoubtedly takes part, and the author finds from his examinations that A. H. Smith's theory of anxiety producing this condition in undue frequency among railway employees has some support from facts. Pancreatic disease has also been known to produce diabetes, though this is not invariably the case. Its physiologic relation to the glycogenic function of the liver remains to be elucidated. The theory provisionally accepted is that the pancreas forms an internal secretion which prevents the discharge of glycogen from the liver. The relation of diabetes to a definite hepatic lesion is as yet not satisfactorily established, and the condition described by Hanot as "bronzed diabetes" is probably a peculiar form of cirrhosis associated with glycosuria rather than a complication of diabetes. Saundby considers it probable, however, that there is a class of cases to which the term "hepatic diabetes" could be provisionally applied. We must not be content to call every case of glycosuria, diabetes, and put it on routine treatment; our opinion must often be suspended and the case studied. He warns that the reduction of copper does not necessarily mean sugar. Unfortunately the cases are common enough in which the diagnosis is plain. The remainder of the paper is given to the subject of treatment, mainly dietetic, and he gives tables of diets, with their heat and carbohydrate equivalents. He does not believe in sending advanced cases to distant health resorts. Exercise must be very moderately indulged in, as fatigue is often fatal.

**Summer Diarrhea, with Special Relation to Causation and Prevention.** F. J. Waldo.—Summer diarrhea in infants is held by Waldo to be probably due to multiple infection, though our knowledge in regard to this point is still very defective. He is inclined to think the disease is communicable under certain conditions, but it is hardly possible that the chief cause lies in the transmission direct from one patient to another, but rather in the existence of a common contagion. He considers contagion very likely due to street dust and mud, but there are many difficulties in the investigation of this subject.

**Clinical Study of Causes of the First Sound of the Heart.** Alexander Morison.—From a study of the question Morison concludes that the impulse given to the blood by the muscular action of the heart in it and in the vibrating structures containing it, gives rise to vibrations of a certain quality which result in that tone which is synchronous with the cardiac systoles usually called the first sound of the heart. The largest share in this result must be attributed to vibration in the blood itself, to produce which, at normal rate, valvular support of the vibrating blood-columns is necessary. This conclusion, based on clinical observation, is essentially the same as that of Leared, but Morison disagrees with him when he says that "the events which occur in the ventricles and at the arterial orifices have no more to do with the generation of the sounds than 'the vibration of a door [has] with the sound produced by the air [passing] through its keyhole.'" There is a difference, he says, in the noise made by a door slammed to and one pushed open. The former represents the second, the latter the first sound of the heart, and in both the character and distribution of the vibrations differ.

**Some Cases Showing the Use of "Gas and Oxygen" as an Anesthetic in Certain Ophthalmic Operations.** W. J. McBride.—The author reports several cases of ophthalmic operations under the use of gas and oxygen, the advantages of which he states as follows: 1. The almost absolute safety of the mixture, which is the safest anesthetic known. 2. The rapid induction of anesthesia, the patient being under in less than two minutes. 3. The induction is without incident and the maintenance in the best cases is quite sleeplike; while full recovery occurs in less than two minutes. 4. The absence of after-effects, the patient being able to leave the room in a very few minutes. 5. The eyeball is fixed, the orbicularis muscle is relaxed and congestion can be entirely avoided by the allowance of sufficient oxygen, while there is no retching, sickness, cough, straining, or unconscious after-movements causing increased intra-ocular vascular tension. 6. The upright chair or semi-recumbent position on a couch can be conveniently and safely assumed. This method of anesthetization is, for several of the above given reasons, admirably adopted for consulting-room work.

### Annales de Dermatologie (Paris), April.

**Clinical and Bacteriologic Study of Impetigo.** R. Sabouraud.—The first division of this work was summarized in The Journal, April 28, p. 1062. In it Sabouraud announced that impetigo is the keystone of dermatology and that it has two fundamental varieties, the impetigo of Tlibury Fox and the impetigo of Bockhart. He then proceeded to establish that the former is the work of the streptococcus; now he states that the latter is due exclusively to the staphylococcus aureus. These two infections, the streptococcic and the staphylococcic, have each their immense train of immediate derivatives; the microbian origin remains the same, but they owe their different names to some detail in their seat or their structure. With their combinations and their mixed forms which disguise and transform them; with the superposed secondary infections which rapidly alter their special characteristics; with their "clinical manners" variable from one subject to another; with their chronic forms swamped in the multitude of eczematiform dermites; . . . . "the two infections, the staphylococcic and the streptococcic, are the center and the nucleus of cutaneous bacteriology." All study of microbian dermatology should commence with them, and in them is the key to the still unsolved general problems of dermatology. Each of these two infections has its acute, distinct and regular type. The impetigo of Bockart is characterized by its periostio-follicular localization, its suppuration from the start, its comparatively difficult effraction, its desiccation and exfoliation in the form of a scab which comprehends the dead lesion in its totality, and the peripilar cicatrix it leaves behind. Anatomically it is characterized by being crowded with leucocytes, by loosening the epidermis through which it forms, being centered by a hair and by showing more or less extensive necrosis of the skin in the depth of the lesion. The microbe is invariably the staphylococcus and it is always massed in the "cupola" of the pustule and in the follicular chimney around the hair. It is the same morbid entity, whether originating spontaneously or consecutive to a physical or chemical traumatism. The staphylococcus does not allow any other microbe to invade the lesions which it determines, unlike the streptococcus, which seems to welcome other micro-organsms. The chronic form is a pustular miliary dermatitis while that of the phlyctenular impetigo of T. Fox is a dermatitis with exudation and later lichenization. "The coincidence of these two infections in varying proportions and with varying localizations, according to the regions involved and the individual case, generates the complexus on which the clinic has bestowed the name of "chronic eczema." The syndrome of chronic eczematization is in reality nothing but the simultaneous occurrence of the staphylococcic and the streptococcic infection. In their acute form each bears the seal of an affection derived from without and contagious. Each can be reinoculated indefinitely on the bearer and the persons in his environment. In their chronic form each obeys the inexorable law that a cutaneous affection of extraneous origin becomes progressively acclimated to the bearer. In this stage they assume an apparently endogenic form and become torpid and permanent. No infection is more distinctly exogenous, in fact, more autonomous, more typical, more cyclic, more limited in its acute form. None is more permanent, more endogenous in appearance, more incorporated into the individual, nor more confused in the maze of its local complications and secondary infections after it has once assumed the chronic form.

**Bulletin de l'Academie de Medecine (Paris), May 1 and 8.**

**Cure of Myopia Without Operation.** Panas.—A young student was exhibited five years ago by Panas, as an example of the fine results attained by removing the crystalline lens in the treatment of myopia. There were no lesions in the choroid, but the myopia had been 13 and 22 D. After the operation he only required glasses for +1D., to neutralize his postoperative astigmatism. Six months later progressive lesions appeared in the choroid, terminating in complete detachment of the retina and total blindness in both eyes. Panas believes that similar accidents are more common than would be supposed from the published statistics, as they occur so late. He also calls attention to the appearance of the choroid lesions consecutive to the operation. For these reasons he has been particularly interested in an observation related by Bettremieux of Roubaix, which he quotes in full. A lad of 14, with progressively increasing myopia, 4 and 5 D., was treated for five months with repeated instillations of a pilocarpin collyrium, supplemented by a compressing cotton bandage applied at night. With no interruption in his studies, the myopia diminished with this simple treatment to 3.50 and 2.75 D., explainable by the decreased anteroposterior axis of the eyeball under the influence of the myotic and the compression.

**Bulletin Medical (Paris), April 28.**

**Symphyseotomy Without Immobilization.** G. Fieux.—After extracting the child, the sutured wound is varnished with a double coat of traumaticin, with no other dressing but the usual abdominal bandage. Reunion is perfect and the patient able to be up on the sixteenth day; two thus treated recovered rapidly with no after-effects, and Fieux now proposes in future operations to leave a small gap to facilitate future deliveries, as he has established that the pelvis and its contents will not suffer.

**Semaine Medicale (Paris), May 10.**

**Diagnosis of Rabies.** Van Gehuchten.—It is evident, from the experiences related, that experimental rabies differs from the natural not only in the symptoms and course, but also in the intensity of the lesions it induces. This explains the contradictory testimony of Nocard, Babes and others in regard to the ganglionary lesions described by Van Gehuchten (see The Journal, May 26, p. 1368), which are only specific for natural rabies and not pronounced until an advanced stage. He considers the symptoms presented by the rabid animal merely the consequence of the ganglionary lesions, and the disposition to bite, a manifestation of the nervous agitation resulting from the turgescence and incipient proliferation of the pericellular capsule. He insists on a more vigorous campaign against vagrant dogs, and recommends that one suspected of rabies—who has bitten a person—should not be killed at once, but the disease be allowed to run its brief course in order to confirm the diagnosis. In future the diagnosis of rabies can be made from the ganglionary lesions, and inoculations will only be needed in case of negative histologic findings.

**Technique and Results of Subarachnoid. Cocain Anesthesia.** T. Tuffier.—Sixty-three operations have been performed by Tuffier or his assistants, on the perineum, rectum, abdomen, urogenital organs and inferior members, including vaginal hysterectomy, nephrectomy, excision of the rectum, etc., with anesthesia that was induced exclusively by a fresh, sterile, 2 per cent. solution of cocain injected into the subarachnoid space at the fifth lumbar vertebra, on a line level with the margin of the iliac crests. In four to ten minutes the patient feels a prickling, tingling and numbness in the feet and legs, and then the operation can be commenced at once, as sensibility to pain and heat is abolished, although sensibility to contact is retained. The analgesia is complete, absolute, and may extend to the axillæ. In one case the patient lifted the stump after amputation of the thigh, to facilitate ligating the vessels. Another listened to the sawing of his femur, but remarked that he could not tell whether it was his leg or the leg of the table that was being sawed. Another, after her kidney had been removed, inquired when the operation was going to begin. Very few consent to be blindfolded. This analgesia lasts from sixty to ninety minutes. The position does not affect the sensibility. No serious accidents have occurred; there was merely a sensation of oppression in the epigastrium, a little nausea and vomiting, sometimes at the time of the injection, but usually not until after a few hours, then it is slight and yields at once to the ingestion of ice. These accidents were noted fifty times in the sixty-three operations. Cephalalgia was more frequent, but was merely a slight heaviness in the head in two-thirds of the cases. In a few it was more severe and kept the patient awake all night, lasting for forty-eight hours. Sweat, dilation of the pupils, tremor of the limbs and acceleration of the pulse were also occasionally noted, but all without the slightest gravity, vanishing within an hour. The temperature also rose in 15 cases, without operative complications, in 1 to 40 C., but returned to normal by the next day, and in 4 a chill for a few minutes was also noted. The patients were between 12 and 60 years of age, and 39 were men. Tuffier uses a special platinum needle, straight, 9 cm. long, the external diameter 11 mm. and the lumen 8 mm. It is strong so that it will not break if it comes in contact with the bone, and the tip is very short. The dose should not exceed .015 mg. of cocain. The technique is much the same as for lumbar puncture. The needle is inserted about 1 cm. from the median line of the spine, with the left forefinger on the apophysis as a guide. There is scarcely any resistance to the passage of the needle and the issue of a few drops of cerebrospinal fluid is the sign that the needle is in the right place. The patient should be warned that he is about to feel a prick and not to stir. Children and hysterics are liable to be afraid, and Tuffier rejects the method for them on this account. In case the anesthesia fails for any reason, the injection does not counterindicate resorting to general anesthesia at once. He changed to ether several times in his early experience, noting merely in such cases that the usual period of agitation was diminished.

**Archiv f. Exp. Path. (Leipsic), March 22.**

**Alcohol and the Work of the Muscles.** J. C. T. Scheffer.—The research reported from the Physiologic Laboratory at Utrecht confirms the results of others, that ingestion of a moderate quantity of alcohol—10 gm. in 90 gm. of water—first increases the amount of work accomplished by the muscles and then lowers it below normal. Experiments on frogs under the influence of curare—and thus the entire peripheral motor apparatus excluded—showed that the alcohol had no influence on the work of the muscles in these circumstances and consequently that it is not dynamogenic. It seems to be a true stimulant for the peripheral motor nervous system, increasing its excitability for a while, but this period is always followed by a depression of reaction.

**Alterations in Blood After Infusion of Salt Solution.** R. Mangus.—The dilution was the only constant change noted in the composition of the blood in numerous experiments on dogs injected with salt solution of varying concentration. This suggests that the dilution is the essential factor in the diuresis which it induces, but does not explain the fact that the diuresis ceases while the dilution is still at its height.

### Archiv f. Path. Anat. (Berlin), April 28.

**Psammoma.** R. Virchow.—When Virchow first described the psammoma, he was careful to discriminate between the sand-containing epithelial and connective-tissue tumors, and reserved the term "psammoma" for the latter variety exclusively. He protests against applying it to cancroids and endotheliomata, and emphasizes again that the sand formation is a concretion which requires an infiltration of calcareous salts as the preliminary. The sand bodies are not organic formations but merely physical concretions. The nature of the tumor containing them is not determined by the structure of the sand bodies, but by the nature of the pre-existing tissue. He also suggests that the existence of pachymeningitis arenosa supports the assumption of an irritative process in the etiology, which applies also to peritonitis arenosa.

### Beitraege z. Klin. Chir. (Tubingen), January and March.

**Carcinoma of the Penis.** H. Kuettner.—From observation of sixty cases at von Bruns' clinic, the writer concludes that the neoplasm must be considered malignant if the subject is young, if there are hemorrhages from the urethra or ulcerated tumor, if the carcinoma has a rapid local growth, if the corpora cavernosa is invaded, or if, with a still small primary tumor, the inguinal glands are suspiciously enlarged. Carcinoma of the penis affords more favorable conditions for successful ablation than does any other region; 59.46 per cent. of the 37 followed to date are permanently cured. In 73 per cent. the neoplasm had existed for one to four years and it was not deemed necessary to extirpate the glands. Of the 22 patients cured, 9 died three to three and one-half years after operation, of heart or lung troubles; 1 succumbed nine years later to a carcinoma of the stomach, and 1 had a cancer of the lip two years after operation, which was also successfully extirpated; 3 are still in good health twenty years after operation, and also 2 others, now over 80, who were operated on ten years ago. When recurrence occurred, it usually followed the operation within a few weeks. The glands in the vicinity must be extirpated in case of a malignant tumor.

**Inflammation in Hernia Without Strangulation.** G. De Francisco.—Czerny remarks that taxis may be more dangerous than an operation in some cases of an empty but inflamed hernial sac. He always operates promptly in such cases, and with invariably satisfactory results. There were adhesions, an abscess, an inflamed rupture of the intestine, of the omentum or appendix, in all except six out of his fifty-nine cases, reviewed in this communication.

**Tincture of Soap for Disinfecting Hands.** Hanel.—Further tests with spiritus saponis (P. G.) have confirmed its efficacy in the disinfection of the hands. It renders them as free from germs as it is possible to have them with our present methods, while it has no injurious effect on the skin.

### Berliner Klinische Wochenschrift, April 30 and May 7.

**Treatment of Infected Wounds with Hydrogen Dioxid.** von Bruns.—To prevent the rapid deterioration of hydrogen dioxid, an acid is added, which is so high priced that it has rendered the dioxid unsuitable for general surgical use. Bruns announces that an absolutely pure, highly concentrated hydrogen dioxid is now made under his directions; it will keep several months, and as the most effective and harmless disinfectant for the treatment of infected wounds. It has a specific bactericidal effect on anaerobics, but merely attenuates the virulence of other micro-organisms. Its chief efficacy is due to its remarkable cleansing of the wound, and its stimulating effect on the tissues. The nascent oxygen forms a foam which mechanically loosens the germ-laden secretions, the coagulated blood and particles of dead tissue and brings them all up out of the wound with it. By this means the wound is cleansed throughout in the most gentle and at the same time most effective manner, while reaction is also promoted. Bruns applies it in a 1 per cent. solution, for irrigation, and on moist compresses. The Germans determine the percentage of solutions by weight, the French by volume; in the new hydrogen dioxid 30 per cent. by weight is equivalent to 100 per cent. by volume.

**Resection of the Rectum.** W. Levy.—In order to retain the important muscles of the sphincter and levator ani, Levy, in removing a malignant growth in the rectum, reaches it through the sacrum, dividing the bone across at the lower edge of the fourth sacral foramina. The results have been extremely satisfactory in a patient thus operated on 1½ years ago to remove a carcinoma high in the rectum. The union of the stumps was faultless, not even narrowing the lumen. Continence is absolutely normal, not disturbed in any way.

**Hydrotherapy as Prophylaxis and Cure of Tuberculosis.** W. Winternitz.—With the free use of scientific hydrotherapy, Winternitz has cured 80 per cent. of all chronic, afebrile cases of tuberculosis in his extensive experience. In "florid" phthisis he has arrested the affection or obtained comparative cure in 32 per cent., and even in the incurable cases, this treatment always gives relief and awakens hope. He urges in the prophylaxis of the disease to increase the resisting power of all threatened with it by having arrangements for cold spongings, pourings, and douches in all tenements and factories. Next in importance are "catarrh sanatoria," with facilities for alternating hot and cold, steam, $CO_2$ and light baths for the poor. He would also have "house sanatoria" in all hospitals, with arrangements for cold and $CO_2$ douches, with trained attendants for cold frictions and stimulating thorax packs. He also insists that all sanatoria for consumptives should have a simple contrivance in every sleeping room for these douches, which are most effective when taken directly from the warmth of the bed. He has devised a contrivance for this $CO_2$ bath, which is transportable and requires no water service. It is a water-proof box, like a steamer trunk, with extension sides, two cylinders stand beside it on the floor, one filled with water, the other with liquefied carbonic acid gas, which forces the water at a certain pressure, under control, through a jointed pipe for a general or local douche as desired, until the last drop of water is exhausted. The water thus saturated with $CO_2$ has an agreeable, mechanically stimulating effect on the skin. In his experience with 400 cases of tuberculosis, he has noted that, in 90 per cent. of married couples, the sound husband or wife fails to contract the disease although constantly exposed to contagion.

### Centralbatt f. Chirurgie (Leipsic), May 12.

**No More Danger in Trephining.** S. von Stein.—With the improved instrument described, Stein is able to operate so rapidly that he has made five openings in the skull of the cadaver in twenty minutes, without the slightest injury to the dura, and his experience on man is very nearly as conclusive. A basket protector, as he calls it, fits over the cutter, a thumb-screw fastening it tight near the upper end. The lower end flares out into a ring which fits against the skull, when the hole has been drilled deep enough. The protector turns with the drill until the desired depth is reached, when the ring pressing against the skull prevents it from entering farther. This drill is then changed for another with a more abruptly sloping cutting point, but with a round button at the extreme tip. The protector is then adjusted to allow the cutter to enter a little deeper, and as the cutter turns, the button at the tip pushes the dura down out of the way of the cutting edge. All possibility of injury is thus obviated and the operator can proceed rapidly and with complete confidence.

### Centralblatt f. Gynekologie (Leipsic), April 7 to May 5.

**To Relieve Cancer of the Uterus.** O. Kuestner.—In case of an inoperable cancer of the uterus, Kuestner opens a passage into the rectum for the fetid discharges, and thus places them under the control of the sphincter ani. The neoplasm is cleaned with scissors and the hot iron ,and a wad of gauze is dipped in alcohol and placed over it, a thread left hanging from the wad. A transverse incision is then made in the rectal wall, establishing extensive communication between the rectum and the vagina, and the thread is pulled out through the anus. The vestibulum is closed with sutures, and the fourth day the alcohol wad is removed by means of the thread. The procedure is simple and harmless, but rubber gloves should be worn by the operator, and the communication inspected occasionally to see that it is kept open.

**Rapid Hysterectomy.** D. STAPLER.—The clamps devised by Stapler fit over the broad ligament from the top to the bottom of the uterus, and are slightly curved to follow its outline. A thumb-screw in the handle holds the two long blades firmly together with an even pressure throughout. The ligament is then cut on the side toward the uterus and the organ thus shells out whole and unopened, without any loss of blood.

**Relative Size of Sternum and Conjugata.** J. KURZ.—The length of the sternum and conjugata vera, measured on 150 patients in Chrobak's clinic, showed a surprising relation between them, in both normal and rachitic skeletons. In 93 per cent. the difference was less than 1 cm., and in the rest it was 1 cm., or a few mm. more.

**Retrostrictural Edema.** G. KOLISCHER.—Our Chicago confrère calls attention to the strictures in the female urethra which may be congenital, or, at least, occur without preceding pregnancy or venereal disease, usually in virgins. Edema forms behind them, extending into the bladder and causing cystitis. Cystoscopy and internal urethrotomy will cure the trouble.

**Artificial Premature Delivery.** W. GRUSDEW.—In a plea for systematic, artificial, premature delivery, in the place of Cesarean section or symphyseotomy—which are always more or less serious matters for the future working capacity of the mother and still show considerable mortality—Grusdew relates his experience with a patient who has now five healthy children, and is, herself, well and strong, and yet her deformed pelvis rendered natural delivery impossible. It was induced artificially between the thirty-fourth and thirty-sixth week on nine separate occasions, always at her home and without complications. He comments on the coincidence that labor commenced spontaneously with the ninth time, at the date of the previous premature deliveries, indicating that the organ had become accustomed to delivery at this stage.

### Centralblatt f. Inn. Med (Leipsic), May 5.

**Limits of Normal Temperature.** MARX.—The writer has been investigating the normal temperature of himself, his friends and 200 patients with afebrile affections, at the Berlin Institute for Infectious Diseases. He found the normal temperature 36 to 37 C. instead of the higher figures given in the text-books.

### Therapie der Gegenwart (Berlin), March.

**Local Application of Tetanus and Diphtheria Antitoxin.** E. BEHRING.—Recent experiments on animals have demonstrated the importance of the direct contact of tetanus antitoxin with the infected and toxin-containing tissues, and Behring lays great stress on the advantages of direct application to the point of infection and vicinity. He recommends using the antitoxin in the uterus, or at least in the vagina, in case of puerperal tetanus, and in the peritoneum, with tetanus neonatorum. A dilution of 1/10 to 1/100 is sufficient for the purpose. He also advocates the local application of diphtheria antitoxin, spraying the nasopharynx with diluted antitoxin as an adjuvant to the injections.

**Continuous Small Doses of Digitalis.**—The necropsy of a middle-aged man showed cor bovinum, moderate stenosis of the ostium aorticum, aneurysmal enlargement of the aorta and arteriosclerosis of coronaries and kidneys. Notwithstanding these lesions, he had been kept in good health for a number of years by the daily ingestion of .1 to .16 gm. of digitalis powder. These small doses enabled his heart to perform its task satisfactorily, and yet he had taken only 305.29 gm. in eight years. He died suddenly in the midst of apparent good health, during some unusual physical exertion.

**Solubility of Uric Acid.** HIS.—According to the view advanced by His, uric acid is not an acid at all, and its solubility depends on the physical conditions of the medium. Introducing new molecules into the medium, sodium bicarbonate for instance, the solubility of the uric acid diminishes in direct proportion to the number of molecules added.

**Psychotherapy of Pains.** H. OPPENHEIM.—When the pains are of hysteric, hypochondriac, psychogenic origin and localized in one extremity, Oppenheim cures them with a course of systematic training by diverting the attention. The patient holds a watch to his ear and listens intently to the ticking, while the painful region is lightly touched, or the painful and a sound region are alternated, followed by pinchings, prickings, etc. A stage is soon reached when the patient finds that by diverting his attention he will cease to perceive the pains. This method of treatment requires patience, but its success in several cases of pseudoischias, etc., has fully determined its efficacy.

### Therapeutische Monatschrift (Berlin), April.

**Covering for the Feet.** ZEUTCH.—All concede that our present methods of dressing the feet are unhygienic, and Zuetch proposes a remedy which will absorb the moisture of the foot and ventilate the shoe at the same time. This desirable result is accomplished by wearing an inner sole of two layers of blotting paper, and underneath them a layer of curled horsehair. The blotting paper absorbs the moisture from the foot and the upper layer will always be found dry; the pressure of the foot on the horsehair crushes it flat, but it resumes its former curl as soon as the foot is lifted, thus creating a vacuum which aspirates air to fill it.

### Muenchener Medicinische Wochenschrift, May 15.

**Immunization.** VON DUNGERN.—If the *Seitenketten* theory of immunization is correct, the immune body and the complement will be found quantitatively independent of each other, which has proved to be the case. It has also been found that the same group of red corpuscles which enters into combination with the immune body in hemolysis serves too for the production of the immune body. When the groups of erythrocytes which produce the reaction of immunization are already saturated with immune bodies, injection of blood thus saturated produces no immune bodies in the animal. This shows that these erythrocytes can not be bound by the *Seitenketten* of the cells—absolutely similar to the immune bodies—and this again confirms the theory. It is further established by the fact that the cells with these complex *Seitenketten* are enabled to draw out complements from the blood serum by the presence of the complementophile groups. Dungern therefore concludes from these facts, which he claims to have established, that the globulicidal and bactericidal immunization reaction—like the closely allied antitoxic reaction—is due to a chemical process, the course of which can best be explained by the *Seitenketten* theory.

**Inflammation and Adhesion of Serous Membranes.** G. MUSCATELLO.—The writer modifies the statements of Heinz on this subject, reported in THE JOURNAL, of March 17, p. 683. He establishes that the loss of the peritoneal epithelium is not sufficient alone to induce adhesions, and also that when the chief condition for the formation of adhesions is present, i. e., the formation of a fibrinous exudate, the presence of the epithelium does not prevent the growing together of the two surfaces. The lifting up, throwing off and degeneration of the epithelium are in fact the consequences of the fibrinous exudation.

**Training of the Partially Deaf and Dumb.** BEZOLD.—By a new and ingenious arrangement of tuning-forks, Bezold has constructed an apparatus for testing the hearing capacity; it has revealed unsuspected partial hearing powers in a number of supposed totally deaf mutes. He urges that all such should be trained in separate institutions, not with those totally deaf, as they only learn to speak like the latter and forget the little they had learned from hearing spoken language before their entrance. Spoken language becomes like a foreign tongue to them under present conditions, and the little they succeed in hearing soon becomes absolutely unintelligible to them, when it might be the basis of almost normal speech.

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THE TITLE of *Sanitätsrath* was recently conferred on a German confrère, Dr. Steffan, and 300 marks exacted for "stamp tax." He stoutly refuses to pay this tax, declaring that he had not solicited the title and prefers to keep his [illegible] and the authorities are in something of a quandary.

# Societies.

## COMING MEETINGS.

Medical Association of Delaware, Rehoboth, June 12.
Massachusetts Medical Society, Boston, June 12-13.
Oregon State Medical Society, Portland, June 26-27.
Colorado State Medical Society, Denver, June 13.
Maine Medical Association, Portland, June 13-15.
South Dakota State Medical Society, Aberdeen, June 14.
Indian Territory Medical Association, Wagoner, June 19-20.
Wisconsin State Medical Society, Milwaukee, June 20.
Third District Branch of the New York State Medical Association, Binghamton, N. Y., June 21.
Second District Branch of the New York State Medical Association, Schenectady, N. Y., June 28.

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Delaware County Medical Society.—The fiftieth anniversary of this Society was held at Chester, Pa., May 25. In honor of his fifty years practice of medicine, Dr. W. B. Ulrich was presented with a loving-cup.

Sussex County Medical Society.—The officers elected at the annual meeting of this Society, held May 15, in Newton, N. J., were: president, Morgan D. Hughes; vice-president, Chas. M. Downing; secretary, Sidney B. Shaley; treasurer, E. Morrison.

Baltimore County Medical Association.—At the annual meeting of this Association, which was held in Baltimore, May 17, the following officers were elected: president, H. Burton Stevenson; vice-president, W. E. P. Wyse; recording secretary, R. Percy Smith; corresponding secretary, R. G. Massenburg.

Toledo Medical Association.—The last regular session of this Society until after the summer months was held in Toledo, Ohio, May 25. The principal feature of the meeting was the paper by Professor Nancrede, of Ann Arbor, on "Actual Experience with Modern Military Projectiles vs. Theory.

North Dakota Medical Society.—The thirteenth annual meeting of this Society was held in Grand Forks, May 25. The election of officers resulted as follows: president, H. J. Rowe, Casselton; first vice-president, H. D. Quarry, Grand Forks; second vice-president, W. H. Bobinstab, New Salem; secretary, Paul Sorkness, Fargo; treasurer, J. A. Rankin, Jamestown. The next meeting will be in Fargo.

Chicago Academy of Medicine.—The tenth anniversary of the Chicago Academy of Medicine was celebrated by a banquet at the Palmer House, May 25. About fifty physicians were present. Dr. W. A. Evans acted as toast-master and responses were made by Drs. Harold Moyer, W. L. Ballenger, W. Cuthbertson, H. T. Byford, E. S. Talbot, G. Fütterer, W. L. Baum, S. N. Hallberg and J. G. Kiernan.

Clinton County Medical Society.—At the twenty-fourth annual meeting of this Society, which was held in Clinton, Ill., May 18, the following officers were elected: president, W. P. Gordon, Carlyle; vice-president, T. Gaffner, Trenton; secretary, M. Broening, Carlyle; treasurer, P. H. Leibrock, New Memphis. Board of examiners: Drs. T. Gaffner, J. G. Vogt, A. W. Carter, J. W. Thompson and S. H. Wilcox.

Medical Association of Montana.—The twenty-first annual meeting of this Association was held in Butte, May 16-18. Nine new members were admitted, and the following officers elected: president, A. F. Longway, Great Falls; first vice-president, T. J. McKenzie, Anaconda; second vice-president, Louis Bernhein, Butte; secretary, B. C. Brooks, Helena; corresponding secretary and historian, J. F. Spelman, Anaconda; treasurer, George H. Barbour, Helena.

Connecticut Medical Association.—The 108th annual meeting of this Association was held in New Haven, May 23 and 24. Twenty-nine new members were added, making a total membership of 676. It was voted to recommend to the general assembly that a hospital be founded for tuberculous patients. The following officers were elected: president, Henry B. Almy, Norwich; vice-president, John H. Granniss; New Haven; secretary, E. N. Wordin, Bridgeport; assistant secretary, H. S. Miles, Bridgeport; treasurer, W. W. Knight, Hartford.

North Carolina State Medical Association.—The forty-seventh annual meeting of this Association was held in Tarboro, May 22-23. Durham was selected as the place of meeting in May, 1901. The following officers were elected for the ensuing year: president, J. M. Baker, Tarboro; first vice-president, M. H. Fletcher, Asheville; second vice-president, David Stanton, High Point; secretary, G. W. Pressley, Charlotte; treasurer, G. T. Sykes.

Indiana State Medical Society.—The fifty-first annual meeting of this Society was held in Anderson, May 24-25. The following officers were elected for the ensuing year: president, G. W. McCaskey, Ft. Wayne; secretary, F. C. Heath, Indianapolis; assistant secretary, J. B. Berterling, South Bend; treasurer, A. E. Bulson, Ft. Wayne. There were over 200 members in attendance. South Bend was chosen as the meeting-place for next year's session.

Missouri Medical Association.—The forty-third annual meeting of this Association was held in Mexico, May 15-18. The following officers were chosen: president, U. S. Wright, Fayette; first vice-president, D. C. Gore, Marshall; second vice-president, J. R. Fritts, Mexico; third vice-president, R. S. Kelso, Joplin; fourth vice-president, Thomas Chowning, Hannibal; fifth vice-president, F. E. Murphy, Kansas City; recording secretary, B. C. Hyde, Kansas City; corresponding secretary, C. R. Dudley, St. Louis; treasurer, J. F. Welch, Salisbury. The next meeting will be in Jefferson City, May 21-23, 1901.

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## Kentucky State Medical Society.

*Forty-fifth Annual Meeting, Georgetown, May 9-16, 1900.*

President, Dr. William Bailey.

### NEPHRITIS CONSIDERED AS A CONVENTIONALISM.

Dr. U. V. Williams, Frankfort, read a paper on this subject, in which he stated that the kidneys are the scavengers of the body, and a correct diagnosis of pathologic conditions is often difficult; that but little can be done in organic disease, where the chronic form is very severe and grave; and that the various distinctions in literature are of little value. The beginning of disease of the kidney is often uric-acid diathesis, and all constitutional inflammation of mucous membranes is due to tuberculosis, diphtheria and specific diseases. The use of ice produces arterial pressure, and contracts the pulmonary vessels and the large ones of the chylopoietic system. Its general use invites nephritis. Cardiac and renal lesions are intimately connected. The great use of sugar is also a factor in production of nephritis.

### RENAL INSUFFICIENCY.

Dr. John G. Cecil, Louisville, considered this subject. He said that a free blood-supply is essential to the proper performance of the function of the kidney; and that the blood must be of normal composition, the uriniferous tubules of normal size and unobstructed. The causes of renal insufficiency are functional, due to congestion from infectious disease and toxic poisons, and organic, due to structural change. The demands of modern progressive medicine are only satisfied by constant, persistent, and perpetual interrogation of the kidney function. In treatment of organic disease give rest, no diuretics, food and drink, clothing, exercise, hydrotherapy, mercury, strontium, and digitalis.

### NEPHRITIS, ITS FREQUENCY AND IMPORTANCE OF EARLY DIAGNOSIS.

Dr. J. A. Humphrey, Henderson, stated that the student of medicine is easily confused by various classifications, and that a simple nosology is a crying need. Nephritis is an inflammation of the kidney, interstitial and parenchymatous; pus may form. He had seen many cases this winter. An epidemic of cerebrospinal meningitis was accompanied by an epidemic of la grippe. The bacillus of Pfeiffer caused, as a complication to la grippe, diarrhea, pneumonia, heart inflammations; and might also nephritis. It is a primary and not a secondary invasion.

Dr. Louis Frank, Louisville, in speaking of causation of acute nephritis disagreed with Dr. Humphrey's theory, as to its being due to the bacillus of Pfeiffer. In the kidney we have a different structure from that of the lung, meninges and liver, and micro-organisms acting on the former would end in formation of pus and destruction of tissue. Trouble in the kidney comes from elimination of toxic products: elimination is the key-note, not the disease itself.

**Dr. J. A. Humphrey** stated that he was convinced his idea was well founded: That the structure of the kidney differed from other organs did not argue that the kidney should be the exception to the general rule of an organism being the cause of the inflammation. The frequency of la grippe coupled with the frequency of nephritis shows a connection between the conditions.

### FEBRILE PUERPERIUM.

**Dr. Henry E. Tuley**, Louisville, read a paper entitled "What Is the Significance of a Febrile Puerperium?" He said that the maximum temperature compatible with the normal is 100 degrees, and that there is a normal chill and temperature, post-partum, from 101 to 104 degrees. This rise is complete at the end of the first twelve hours, and has reached the normal, below 100, at the end of twenty-four. On the occurrence of fever the diagnosis is assisted by a consideration of other symptoms, pulse, lochia, facial expression, state of the bladder, breasts and after-pain, The following diseased conditions were mentioned as responsible for rise in temperature: sepsis, auto-intoxication from the bowel, malaria, mastitis, typhoid fever, epidemic la grippe, tuberculosis, the exanthemata, eclampsia, erysipelas, pneumonia, rheumatism. There is no such condition as milk-fever, and so prone is a sepsis to occur that one should keep this constantly in mind, and arrive at a diagnosis by exclusion.

**Dr. Isaac J. Townes**, Beach Grove, reported seven cases of puerperal fever, three of them his own, two in the practice of other doctors, and two in nurses; three died. He believed it epidemic.

**Dr. R. C. McChord**, Lebanon, considered Dr. Tuley's paper timely. He said that sepsis is reprehensible in almost every instance; and that it is a disgrace to the medical profession that midwives are allowed to practice in this enlightened day. Frequent examinations during the progress of a case are unnecessary. He uses a post-partum douche as routine practice, and believes that all patients should be thoroughly examined afterward and all wounds repaired.

**Dr. W. B. Gossett**, Louisville, said that the term "puerperal fever" should be dropped, and the word "infection" used; that there are three forms—sapremia, septicemia, pyemia; and that no pathogenic organisms are normal in the uterus. He said he would not use an ante-partum douche unless most especially indicated; and there is no need of the post-partum douche. He gives ergot in all cases.

**Dr. F. L. Lapsley**, Paris, said that intestinal intoxication is frequent, and that temperature of 100 and 101 disappears after catharsis; that true puerperal infection is due to causes from without. Ergot is an old remedy but is best displaced by quinin and strychnia, that gives the same and better results. He urges all women to get up after the first few hours for emptying of the bladder.

**Dr. J. L. Atkinson**, Campbellsville, stated that the high rate of mortality in puerperal sepsis is caused by the inefficiency of treatment, and that most febrile conditions are due to sepsis.

**Dr. D. A. Simmons**, Adairsville, in speaking of local treatment, said that there is too much interference with the body of the uterus, that the general treatment is very unsatisfactory, that douching is not good, that the use of the St. Cyr curette is better.

### CANCER OF THE BREAST.

**Dr. Jas. H. Letcher**, Henderson, read a paper entitled "Early Diagnosis and Complete Removal of Cancer of Breast." He quoted Williams' statistics, and said that mortality from cancer is greatly increased, that it is 4½ times greater now than it was a century ago; and that it is probably of parasitic origin. In suspected cases, give the patient advantage of doubt by thorough excision of all the glands. There is hope in the first operation. About 40 per cent. of tumors of the breast are cancerous, and often not seen until there is systemic infection. Tuberculosis, mastitis, and cancer should be differentiated; if chronic mastitis extends beyond the climacteric, amputate dangerous portion, upper and inner.

### LITHOLAPAXY.

**Dr. A. H. Barclay**, Lexington, read a paper entitled, "Litholapaxy with Report of Cases." He prefers litholapaxy to lithotomy unless a combined operation is used—because convalescence is shorter, and there is small mortality, especially in the extremes of life. A child's urethra permits considerable dilatation; he reported five cases, the method used, when the patient is free from inflammatory condition of the bladder and urethra. He uses an alkaline solution or boric acid irrigation prior to and at the beginning of operation; when the kidney is free from trouble, eight ounces of fluid in the adult, four to six in a child, injected through an evacuating tube. Frequent introduction causes a swelling of the mucous membrane. Washing is continued until all fragments are removed; eight ounces of boric acid is left in the bladder, and patient kept in bed four days. Contraindications are tight stricture, organic disease of the bladder, sacculated bladder and encysted stone.

### SOME COUNTRY SURGERY.

**Dr. Arthur T. McCormack**, Bowling Green, read a paper on this subject and reported cases, among them one of traumatic obliteration of the cavity of the uterus, due to craniotomy following labor lasting a week, seen four years subsequently.

### INFLAMMATION OF MIDDLE EAR.

**Dr. A. O. Pfingst**, Louisville, read a paper entitled "Inflammation of Middle Ear in Infants and Children." He referred to the muco-purulent fluid found in the middle-ear cavity of the the new-born, which is believed to be physiologic. In exanthematous fevers, the mucous membrane may be infected by circulation, but in a greater number it is through the tube; low vitality plays a part; it runs a benign course; pain is not frequent, the only evidence is the placing of the hand and restlessness; there is normal or slight rise of temperature. The spontaneous escape of pus is not common in children; the inspection of the drum tells little: if the tube is glued, the drum protrudes; the tendency is not great for inflammation to spread through the mastoid cells. Loss of appetite, emaciation, weakness, general marasmus, and digestive symptoms are so prominent that the ear is not thought of. The ears of children should be frequently examined. Ice or hot bags, or paracentesis, will keep it open when there is spontaneous rupture; chromic acid crystals are best for this; and there should be frequent removal of escaping pus by boric acid solution. If the mastoid process is infected, open at once. The prognosis of otitis in infants and children is uncertain.

### "SURGICAL FANATICISM."

**Dr. Ap Morgan Vance**, Louisville, read a paper entitled "Too Much Enthusiasm in Surgery; Welfare of Patient Should Be First Law." The operations mentioned as unjustifiable were the Kraske operation, for cancer of the breast with great involvement; following the lymphatics along the arteries in cancer of the uterus; buried suture of silver wire; Edebohl's examination of the kidney through the lumbar incision; prophylactic removal of the normal appendix to prevent appendicitis; circumcision, as an operation should never be done in the newborn except where good reason exists; ligation of abdominal aorta—twelve cases were found in literature with twelve deaths; forcible correction of Pott's disease; operation on Gasserian ganglion.

**Dr. A. J. Slaton**, Leitchfield, stated that prophylactic removal of the appendix is out of the question, but all male children eight days old should be circumcised.

**Dr. P. B. Scott**, Louisville, referred to the removal of the mammary gland in malignant disease, and said that it is difficult to assure a patient that the mammary tumors will not return, though under modern technique, they will not appear in the affected part.

**Dr. J. G. Sherrill**, Louisville, said that every conscientious surgeon would concur in these statements by Dr. Vance, for the profession is injured by operations which give no permanent benefit; and that the recommendation to excise the appendix is not justifiable. It is too often h [illegible] "the operation was a success, the pati [illegible]

**Dr. H. E. Tuley**, Louisville, [illegible] of unjustifiable surgery in obstetrics, the treatment which was recommended by a Canadian, to make a digital exploration in all women after the completion of the third stage of labor, for the finding of any possible retained placental tissue.

### CLUBFOOT.

**Dr. Ben F. Parrish**, Midway, read a paper on this subject, in which he stated that all cases of congenital clubfoot can be cured; that the spastic variety is easy of diagnosis; and that the cause of the congenital form is speculative. When correcting it, the normal position should be assumed and kept long enough to improve nutrition. It is inadvisable to do this by a bandage; the pain can be prevented by paregoric. He mentioned Sayre's classification of contracted and contracture tendon, and said that the tendon should be severed in the latter form, but no opium should be given if there should be no pain. The dressing should be changed in two weeks, and any deformity remaining, corrected. The paralytic form is difficult to help, but the tendon grafting has good result.

*(To be continued.)*

## Fourth District Branch New York State Medical Association.

*Sixteenth Annual Meeting, Buffalo, May 8, 1900.*

President William H. Thornton, M.D., Buffalo, in the chair.

### CONTUSION OF THE EYE.

**Dr. Alvin A. Hubbell**, Buffalo, read a paper in which he detailed the histories of two cases of contusion of the eye, in one of which anteversion of a portion of the iris took place, and in the other, retroflexion of the whole iris. The third case was one of the removal of a piece of iron from the interior of the eyeball. Of the cases of contusion, the first was a boy 14 years of age, who had been injured in the eye by a bullet, about one-fourth of an inch in diameter, discharged from a Flobert air-rifle. This was on Aug. 28, 1898, and on the following day the case was brought to him for examination. The boy stated that the ball had struck the eye and dropped on the ground, and he had picked it up. Examination showed no evidence of penetration of the eyeball. The pupil was distorted, and the iris was torn from the inner side and turned over so that the posterior surface was turned forward. At first glance, it appeared to be crowded to one side, and the vitreous humor protruding. After keeping the case under observation for some time the capsule of the lens was seen to be broken, and, in due time, the crystalline lens was entirely absorbed. The anteversion of the iris had remained permanent, but the eyesight had been preserved, just as it would have been after the removal of a cataract. Such an injury is exceedingly rare, the most peculiar feature being the anteversion of the segment of the iris.

### RETROVERSION OF IRIS.

The second case was one of retroversion of the iris; its sphincter having become ruptured, the iris was turned backward. Where the whole extent of the iris is involved, there is usually also a rupture of the suspensory ligament of the lens, and when the entire iris is turned backward, the lens is dislocated into the vitreous humor, and the iris lies on the ciliary body. In this case there was a retroflexion of the entire iris, so that the whole width of the cornea appeared as a black space. The patient was a German, 55 years of age, who had come under observation on May 26, 1899. Fifteen days previously, he had fallen from a wagon, striking the left side of the face against the pavement. When first seen, the cornea was hazy, and the aqueous chamber was filled with blood. The tension of the eyeball was considerably diminished. The blood was gradually absorbed, and by June 10 had entirely disappeared. Probably there never was any hemorrhage into the ball except in its anterior portion. No vestige of the iris could be seen and in the anterior part of the eye was a quantity of dark colored debris, which floated about in masses or shreds that seemed to be attached to the ciliary body. These were gradually absorbed, and in a few weeks the patient was able to count fingers. On June 23, with a strong cataract glass, vision was 6/60 at a distance of twenty feet; the opacities had disappeared, and no portion of the crystalline lens could be found by him or by several other ophthalmogists. The fundus of the eye presented no pathologic appearance. In February of the present year his vision was half the normal.

### REMOVAL OF FOREIGN BODY.

The next case reported was one of the removal of a foreign body from the eyeball, eighteen years after the injury. The patient was a sailor, 26 years of age, who had been for many years on vessels as an engineer. On Nov. 23, 1881, while making some repairs, a piece of iron penetrated his left eye. He went at once to Paris, and was examined by De Wecker, a world-renowned oculist. The opinion was expressed that there was no foreign body. Since that time the eye had remained more or less weak, and from time to time there had been attacks of inflammation. When first seen by Dr. Hubbell, in November, 1897, the left eye was normal in size and tension, and midway between the center and the outer margin was a brownish scar, and its surface appeared ulcerated. After dilatation with atropin, portions of the lens capsule could be seen apparently separated at one or two points. After a few days' observation, the inflammation subsided, but a similar attack occurred in March, 1899. According to his history, in 1892 there had been a severe inflammation in the uninjured eye, and at this time, and on a subsequent occasion of this kind, the inflammation of this eye had been preceded by tenderness of the uninjured one. Last fall a foreign body had been discovered in the old scar, and it had been found quite adherent. The electromagnet did not attract it at all, so, after incision of the parts, the foreign body was removed. It proved to be a piece of cast-iron, about 3 mm. long, oxidized, and almost spongy in texture. In ten days this eye was practically well. The piece of iron was too near the optical axis to injure the ciliary body. Two days after the operation the right eye became somewhat reddened and painful, and required treatment for several weeks. During the long retention of the foreign body the lens had become absorbed, and there had been at least two attacks of severe iritis of a sympathetic character in the other eye. This is apparently one of the very few cases of sympathetic ophthalmia in which recovery has taken place.

**Dr. Arthur G. Bennett** said that the case of retroversion of the iris is proved by the literature to be decidedly unique. The iris is not uncommonly torn from the periphery, but this turning of it is exceedingly rare. He had himself removed a piece of steel that had been retained in the cornea for six years, without any further inconvenience than sensitiveness to bright light. The man had come under observation without any knowledge of the existence of this foreign body in the cornea, and had sought relief for what was supposed to be merely eye-strain.

**Dr. A. A. Hubbell** said that he had never been able to dismiss the idea that the man with retroversion of the iris had struck his eye against some small body on the pavement, and that this body had rolled out of the way and had not been observed, so that it had been thought the injury was entirely the result of coming in contact with the pavement. However, there had been no external evidences of injury from such a body.

### GOITER.

**Dr. E. J. Meyer**, Buffalo, read a paper on this subject. He said that goiter occurs: 1, sporadically; 2, endemically; 3, epidemically; and 4, as a prominent feature of Basedow's disease. He said also that goiter was endemic in certain portions of New York State, in Detroit, Mich., and in lower portions of Canada at one time. In the region of Kingston, Ont., the disease is very prevalent, even certain strains of dogs and horses being goiterous. Munson found 1323 cases among the Indians of this country, and was impressed with the racial tendency to this disease. His conclusions were that the disease does not seem to be caused by high altitudes nor by water containing a large proportion of lime salts. Its development is favored by an excessively nitrogenous diet, and hereditary influence is strongly marked. The tumors among the Indians are smaller than among the whites. Often districts where goiter is frequent are separated by narrow limits from districts free from the disease. The water of certain streams have been known to almost invariably lead to the development of goiter in those drinking it. In Kocher's opinion, whenever a child develops cretinism, it will be found that the parents have had goiter; and as he believes that the organic constituents of the drinking water are responsible for it, he recommends that the water be boiled.

The disease is quite prevalent in certain portions of Michigan; in Otsego county it is reported that one-fourth of the children born there, and reaching maturity, have goiter. Morris, of Hamilton, England, reports having seen fifty-five cases in a population of 15,000. Marsh attributes endemic goiter to infection, basing this opinion on its production in persons drinking the water of certain streams, and its disappearance after the introduction of better drainage. Epidemic goiter has been met with chiefly in certain parts of Europe; within a month after the arrival of troops in an infected region, 30 or 40 per cent. had developed it. The organisms found in this affection, by Klebs, seem to show that only under certain conditions do they cause the disease. It may develop in unexpected situations by what are called accessory glands. Virchow divides goiter into: 1, hypertrophy of the gland—a comparatively rare form; 2, fetal adenoma; 3, gelatinous or interacinous goiter, appearing usually in the later periods of life. It is in this form that cysts are commonly found. Virchow also recognizes follicular, fibrous and vascular forms. In the so-called aneurysmal goiter the arteries are chiefly involved; and in the more common varieties, the veins are generally enlarged. Special varieties result from changes and degenerations in these three forms, and the most common form of this malignant degeneration is round-celled sarcoma.

In this country the physician is most commonly consulted in cases of goiter because of the disfigurement, though pressure on the esophagus, or on the vessels of the neck may demand relief, as may also the profound changes of nutrition described under the names myxedema and cretinism. It is not safe to remove the entire gland because of the danger of myxedema, for 12 per cent. of all cases in which total extirpation is done develop this or tetany, which, though not fatal, requires the constant administration of the thyroid extract. Kocher removes the thyroid regardless of the danger of tetany or myxedema, fearing the occurrence of malignancy. For the relief of dyspnea the removal of one-half of the thyroid will often prove sufficient.

A case of Graves' disease on which he operated in December, 1899, was next considered. The patient presented the ordinary symptoms of that disease, and the thyroid gland was about the size of a Florida orange. He removed half of it. But by the administration of twenty grains of thyroid extract daily for several days most of her former symptoms could be made to return.

**Dr. De Lancey Rochester** said that it is useless to speak of the various forms as having a common etiology, for many of the cases reported seem to indicate a distinctly infectious origin. The development of goiter in school children has little or nothing to do with the position of the head at that time of life, as some have suggested. He was glad that the removal of the entire goiter in Basedow's disease had not been recommended—indeed, each individual disease should be carefully studied before advising even the removal of a portion of the goiter; and if the tachycardia develop before the goiter, one could not look for much benefit from such an operation. The section of the sympathetic is a method likely to yield good results so far as the goiter and the tachycardia are concerned, but the profession still entertains misgivings as to the possibility of remote and unpleasant effects. He has had three sisters recover from goiter under the persistent use of tincture of aconite and iodid of iron, as recommended long ago by Flint. He began with three drops of the tincture of aconite, and gradually increased it, but did not go beyond a dose of eight drops, three times a day. One of these patients took the aconite for 1½ years, and the other for about six months before the desired results were secured. Both have now remained well for a period of about eight years. The iodid of iron seems to him the best form of iron to combat the marked anemia found in these patients.

*(To be continued.)*

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## Nebraska State Medical Society.

*Thirtysecond Annual Meeting, Omaha, May 8-10.*

President Dr. Robert McConaughy, York, in the chair.

### HISTORY OF STATE SOCIETY.

**Dr. W. H. Orr**, Lincoln, gave a report of the Society from the time of the first meeting in 1868. He mentioned the efforts made to secure medical legislation, that were not successful until 1881, and the Board of Health, that was not secured until 1891. He urged the members to join the American Medical Association.

### NATURE OF ANTIPHLOGISTIC ACTION OF SALICYLATE OF SODIUM.

**Dr. Harold Gifford** read a paper on this subject. He said that without regard to the absence or presence of rheumatism, it must now be acknowledged that this drug has a marked antiphlogistic action in all localized inflammatory conditions, involving moderate areas. One of the best illustrations is its action in sympathetic ophthalmia, an infectious disease arising from an unknown germ. Years ago he took the position that it so actéd because it was a germicide. The conclusions were based on the fact that large doses are necessary and most successful in those most tolerant of it. To test the question, he made most careful examination of the urine of several cases, and found that 95 per cent. of the salicylates eliminated passed out through the urine. He used a definite dose of 150 gr. daily for a patient weighing 150 pounds. The amount found in the urine plus 5 per cent., subtracted from the 150 gr., gives the amount retained in the system. Three patients showed an average of 17 gr. retained. This must be diffused through the 130 pounds of the soft tissues of a 150-pound man, a proportion of 1:52,529. He asked: will the drug, in this proportion check pathogenic germs in the test-tube? A slight check in the body may allow the body cells to gain the upper hand and do the rest. Unfortunately, it requires 1:1000, or 1:500, to check pus germs in the tube in a decided manner. Anthrax grew very sparingly in a 1:1000 test. This evidence is opposed to the conclusion that 150 gr. in fifteen hours has much *direct* effect on germ growth in the body. Of how this is affected in the body, Oltramare's theory gives the most plausible way. He thinks that the salicylate produces a local depletion by the general capillary dilatation it causes. In a small inflamed area, the arterioles are dilated to the maximum by the bacterial toxins; the action of the salicylate causes a general dilatation of the arterioles over the whole body; this lessens the amount of blood passed through the inflamed area and checks the bacterial growth there.

### SEPTIC PERITONITIS.

**Dr. Chas. C. Allison** read a paper on "Septic Peritonitis, Studied from Its Major Points of Origin." He said that the prognosis is grave, and the possibility of recovery is denied when the entire peritoneum is involved. The major points of origin are the appendix, the Fallopian tubes, the gall-bladder, and the stomach and duodenum. Protective barriers develop; intestinal coils adhere, and the omentum assists in forming a wall. The most successful means of treatment is rest without food, enemas. and gentle laxatives. Safety is assured when local disturbances are past; when collapse, if present, has been recovered from; when pain is less severe; when the pulse, respiration, lessened muscular rigidity, temperature, and general aspect are in accord. The bed-side picture is the only safe guide. Sudden amelioration of pain may mean either gangrenous appendix, general peritonitis, or the formation of an abscess, hence *all* symptoms must be taken into account. Ectopic pregnancy must never be forgotten. It may be present and rupture infraperitoneally, and can occur during lactation. Paroxysmal pain and faintness are usuallly present in ectopic rupture and will point to this condition. Acute, gastric or duodenal ulcer is rare; the symptoms are overwhelming and the collapse is very rapid. Gastric ulcer ruptures on the anterior wall of the stomach in 90 per cent. of cases and on the posterior wall in 2 per cent. The symptoms of perforation are: acute pain; rapid collapse; rigidity of abdomen; subnormal temperature; leucocytosis; rapid respiration; and absence of liver dulness. Surgical measures only are available. Exploration, cleansing of the affected area and no more unless the general cavity is invaded, are demanded. When the abdominal cavity has been invalided, and much exudate is present, counter-opening is needed, with thorough irrigation.

### PAROTIDITIS.

**Dr. H. P. Hamilton** made a plea for the consideration of this as an infectious disease by no means limited to the parotid gland. He gave the history of a few cases and his treatment. surgical in character.

### LEUCOCYTOSIS IN SURGICAL DIAGNOSIS.

**Dr. J. P. Lord** read a paper on "Leucocytosis as a Factor in Surgical Diagnosis," in which he said that leucocytosis [illegible] now being used to indicate the presence or absence of pus, or of any acute inflammation. "The number of leucocytes is not always in proportion to the amount of pus, but is, as a rule, to the virility of the infectious organisms." Thus, greater leucocytosis is present in a felon than in a pelvic abscess of large extent. The amount of the leucocytosis may also depend on the thoroughness of the walling off of the pus, or on the death of the germs. It is valuable in differentiating typhoid from appendicitis, also in confirming an opinion that one is dealing with a colic of any form, an intestinal obstruction, a pneumonia or a meningitis. After operations, it is valuable in showing the subsidence of extension of suppurative conditions. He gave the findings from four cases.

### ECTOPIC GESTATION.

Dr. W. O. Henry considered this subject. He said that, having met with five cases during the last three months, he felt it highly necessary that greater care be taken in the diagnosis, as it is by no means so rare as has been thought. There are four varieties, the interstitial, the tubal, the ovarian, and the abdominal. The tubal is the most common, and while the ovarian variety has been denied, it does occur and is proved by the fact that a Graafian follicle is found at the base of it. The causes are still unknown, but the best theory is that it is due to obstruction. Medical attention is rarely called until rupture takes place; then the pain is ovarian; there are faintness, nausea and bearing down sensations; the cervix is soft; pulsation of uterine artery is plainly felt; a soft mass is felt in the vault; a very dark discharge comes from the uterus. If these conditions are neglected, temporary improvement may take place, but they will be repeated and death takes place often in rupture. He placed great stress on the very dark discharge. In the majority of cases vaginal puncture and drainage is the best plan; if this treatment is found inefficient he opens the abdomen. If there is great shock, normal salt solution must be used freely.

Dr. A. F. Jonas said that he had seen an eminent laparotomist open the abdomen to remove a pus-tube and find an ectopic pregnancy. In his experience, the diagnosis was very difficult. If, as Lawson Tait asserted, the ovum develops in the Fallopian tube and ruptures in the twelfth week, if the ovum escapes between the folds of the broad ligament, we have the hemorrhage there, gradually dissecting the peritoneum away from the pelvic floor, and there is a tense, elastic tumor in the cul-de-sac, then vaginal section is the operation. If in the presence of the classic symptoms of ectopic pregnancy we have symptoms of rupture and no tumor in the cul-de-sac, then the ovum and hemorrhage are in the abdominal cavity and we must do an abdominal section. Kelly has made the abdominal section after he had done the vaginal, by reason of the fact that he was unable to control the hemorrhage.

### TREATMENT OF PNEUMONIA.

Dr. W. O. Bridges read a paper on this topic. He said that pneumonia is the most wide-spread of all the acute diseases. Specific treatment has long been sought, and the latest teaching is to rely on the expectant plan, meeting the indications as they arise. This yields as good results as heretofore and does less harm. The elder Flint took a long step forward when he took the position that it was an infectious fever. Two years ago he treated a case with the carbonate of guaiacol and secured good results. He was much interested in the recent article of A. H. Smith, which urged the use of guaiacol and the salicylates. Cassante and W. H. Thompson report very favorably on the use of the former. Liegel reports seventy-two cases treated with the salicylates, 120 gr. a day. His results were good. He said he himself had tried it in but eight cases the past winter, but his results were so good as to warrant calling attention to them. He used the drug constantly; in the early stages, 10 gr. every two hours, and strychnia in 1/20 gr. doses for short periods. He uses codein only for pain and delirium; and uses oxygen on the first sign of cyanosis. He is very careful to require the recumbent position, and an abundance of fresh air at a low temperature—55 to 65. He thinks that most so-called unresolved pneumonia is purulent pleurisy. He always uses the needle. He has seen many cases with bronchial breathing and yet there was a large cavity with much pus in it. He said that but few unresolved pneumonias end in tuberculosis. He sends them to the high altitude of Colorado Springs, and they get well.

Dr. W. R. Lavender laid great stress on the fact that the toxins produced during pneumonia cause great degeneration of the heart muscle and death.

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## Illinois State Medical Society.

*Fiftieth Annual Meeting, Springfield, May 15-17, 1900.*

*(Concluded from p. 1416.)*

### HYPERTROPHY OF PHARYNGEAL TONSIL.

Dr. Edward T. Dickerman, Chicago, read a paper in which he discussed hypertrophy of the pharyngeal tonsil, adenoid vegetations, and enlargement of the third tonsil. A table accompanied it, from which the following facts were gleaned: 1. Cases are found at all ages, from the youngest—aged 6 weeks—to the oldest—43 years of age—but that the disease is found most frequently in childhood; 40 per cent. were found in children between the ages of 5 and 10 years, and 31 per cent. between the ages of 10 and 15. 2. Sex plays but a small rôle, although there is a slight excess to the credit of the female. 3. Mouth-breathers numbered 431, mouth-breathers at night only 74, while 21 breathed freely through the nose. 4. In 78 per cent. a lymphatic tendency was expressed by the enlargement of the faucial tonsils to a pathologic size. 5. A very important fact noticed was the large percentage—72 per cent.—of cases with, or with histories of, aural complications. 6. Hemorrhage was never alarming, and in but one case was there a secondary one. 7. Recurrence occurred in but two cases, where the operation was done under an anesthetic, and a secondary operation was necessary in 14 cases where no anesthetic was used, but the results were not always as satisfactory in cases not anesthetized. 8. Anesthetics were used in 304 cases in the following manner: Chloroform, 201 times; ether, 64; bromid of ethyl, 34; nitrous oxid, 5. He prefers chloroform properly given, although in some cases ether is probably better, notwithstanding the nausea that generally results.

### RECTAL DISEASES.

Dr. J. R. Pennington, Chicago, discussed the diagnosis of rectal diseases, and, in order to clearly elucidate the matter, he called attention to a few points in connection with the anatomy and histology of the structure of the rectum and sigmoid flexure. Some of the statements made were a radical departure from those generally believed and accepted by the profession, but abundant evidence was advanced in favor of his position, relative to certain anatomic and pathologic points.

### HEMORRHOIDS.

Dr. N. H. Henderson, Chicago, spoke on the treatment of hemorrhoids, and discussed a modification of the Whitehead operation, that he has used in operating on 400 cases.

### CONDITION OF SCHOOL CHILDREN.

Dr. E. A. Edlen, Moline, read a paper on "Mental Overwork and Lack of Interest in Physical Development and Hygienic Care of School Children, a Menace to the Future of the Race." He said that the present system of education in public schools tends to develop the mind at the sacrifice of the bodily health and physical development. The school-teacher takes pride in developing the intellectual faculties and ignores the physical well-being of the child. No discrimination in favor of the weak or backward child is practiced, and subjects beyond the grasp of the intellectual faculties are studied, and the reason for backwardness and inability is seldom considered. School hours are too long and lessons are not made interesting. Children are unable to fix their attention on any subject for more than a short time, still they must sit quiet during hours at a time in an over-crowded room, in an uncomfortable position, trying to learn an unintelligible lesson—all in direct violation of Nature's laws. The multiplicity of subjects bewilders the youthful mind and causes great strain on the nervous system, with a resulting breakdown. The physical development of school children is ignored by the average board of education, although it is equally as important as mental culture. It must be considered or the future of the nation will be endangered.

### SCIENTIFIC NEED OF LEGISLATION ENFORCING COUNTY REGISTRATION OF SYPHILITICS.

Dr. Jas. E. Coleman, Canton, read a paper on this subject. He said that there is an alarming increase of venereal disease since the close of the Spanish-American War and that something must be done to prevent the spread of syphilis, for the extragenital chancre is abroad in the land and the public health is not safe. Nearly all contagious and infectious diseases are quarantined by the public, and venereal diseases are not mentioned, while they are more dangerous in their remote consequences than all the contagious ones combined. These facts should be recognized by legislators, and a law passed making compulsory the registration of syphilitics. It is the duty of the medical profession to insist on this.

### STATE MEDICINE AND SANITATION.

Dr. A. C. Corr, East St. Louis, presented a paper entitled "A Further Consideration of State Medicine and Sanitation." He said that the conditions requiring state medicine are the otherwise uncontrollable sanitation necessary to preserve and promote an average health among the citizens of the state. State medicine consists in state help to produce and preserve conditions of sanitation too great for the citizen of the lesser political divisions, such as township, city or county, to maintain, and is a legitimate outgrowth of our social and civil compact. It has limits with which all of us do not exactly agree, and an individual will differ with himself according to his mood. Sanitation and state medicine should be brought continuously before the people and legislative bodies; they should be well argued and forcibly presented so as to bring about a mature conclusion at as early a date as practicable. The question of public water-supply for potation and culinary purposes should be more thoroughly considered than it has been in the past. Limpid water, free of visible particles of sewage, should be provided by companies—corporations asking for the franchise.

### STATE CARE OF CONSUMPTIVES.

Dr. John A. Robison, Chicago, read a paper on this subject, and said that the prevention of disease is one of the most important paternal duties of the state. Members of the medical profession should bring to bear upon legislators and state officers such influence as will fill them with a desire to institute such measures as experience has proved to be efficacious in the prevention and cure of this malady. These measures should be directed to two subjects: the prevention of the disease and its cure or the alleviation of its victims and their families.

### SANITARIUM TREATMENT OF PULMONARY TUBERCULOSIS.

Dr. Florence W. Hunt, Chicago, contributed a paper on this subject, which in her absence was read by Dr. Moyer. The history of the sanitarium movement was discussed at considerable length, and attention called to the fact that it has been more actively and energetically advanced during the past ten years than has any other agency in the medical world. A brief summary of the movement was presented. Great Britain was given credit as a pioneer in the founding of special institutions for consumptives, the first chest hospital being established in London, in 1814. The United States was one of the first countries to build a sanitarium for the consumptive poor. To establish a sanitarium for consumptives in Illinois would be a readjustment of existing institutional conditions on a more economical basis, for by removing the consumptives the institutions would be rendered more efficient in the special aim for which they are designed.

### RELATION OF THE PHYSICIAN TO THE PUBLIC SCHOOL.

Dr. Katharine Miller, Lincoln, read a paper on this subject in which she said that by virtue of the increasing recognition by the public of the need of proper sanitation in school-buildings, the physician has a closer relation to the schools than has the average citizen. This is emphasized as the public recognize that the professional training of the doctor fits him for the oversight of these things and makes him a skilled adviser. Aside from this, the spirit of the profession compels the physician's interest in these questions; and also in the subject of arrest and prevention of contagious diseases among children, the care of the body, including exercise and bathing, and examination as to defects in hearing and sight in their relation to mental development; all of which come within his province. Those who have studied these things must realize most clearly how much may be done for the rising generation by the supervision of the physican. To secure the opportunity for this, an enlightened public sentiment is needed and here the physician has a chance to use voice and pen to advantage in giving information.

Results are seen in the improved conditions of school-buildings, leading to better health of the children, the enforcement of vaccination, and the general enlightenment of the community as to the need and effects of school hygiene. As a matter of civic duty from those citizens specially fitted to render such service, physicians should interest themselves in school sanitation. They should be informed as to methods of heating, lighting and ventilating schoolrooms, occasions for quarantine, the effects of defective sight and hearing, needs of departments of cooking and manual training, school gymnasiums, amount of work to be required at various ages, and the adaptation of buildings, blackboards, etc., to the children's neeeds.

### TREATMENT FOR TUBERCULOSIS.

Dr. W. J. Chenoweth, Decatur, read a paper on this subject with the axiom, "Remove the Cause and the Effect Will Cease." He said that assuming that the disease is the result of an attack by the tubercle bacillus on a susceptible lung, there is necessarily a combination of two factors, neither of which, if kept from the other, could have produced the disease. The result of the combination is evinced by an alteration of the organic and functional processes of the lung. The only conceivable method of relieving it is to render it unfit food for its enemy, which can be done only by bringing it up to a standard of health.

### WHAT SHALL THE HARVEST BE?

Dr. R. H. Henry, Peotone, read a paper, with this as the subject, in which he said that all schools, private or public, should be under strict medical inspection—teachers and pupils alike. All tuberculous suspects should be tested with tuberculin, and school-buildings and premises should be thoroughly disinfected at the close of the school season and again at the beginning of each term, and floors should be scrubbed at least once a week with a disinfectant solution. There should be a medical health officer for each school, who with the board of directors, should constitute the school board of health. The teacher must know how to take pulse and temperature, and note the symptoms of the common ailments in children.

### VALUE OF PEDICLED FLAPS IN INJURIES OF THE HAND.

Dr. Wm. Schroeder, Chicago, said that injuries of the hand which result in the destruction of skin and subcutaneous tissues, leaving the tendons and all or some of the bones and joints intact, may in many instances be repaired by judicious treatment. Amputations are frequently resorted to in contused, lacerated wounds of the hand, whereas burns are usually allowed to get well of their own accord, that is, plastic operations are not often performed. It is for such cases that he recommends the pedicled flap method; this he described in detail, giving as its advantages mobility, elacticity, and certainty of taking. Four interesting and instructive cases were reported in which the results obtained were excellent.

The following officers were elected for the ensuing year; president, George N. Kreider, Springfield; first vice-president, Weller Van Hook, Chicago; second vice-president, Denslow Lewis, Chicago; permanent secretary, E. W. Weis, Ottawa; assistant secretary, O. B. Will, Peoria; treasurer, E. J. Brown, Decatur. Officers of Section One: Chairman, Charles Dewey Center, Quincy: secretary, G. W. Nesbitt, Sycamore. Officers of Section Two: chairman, M. L. Harris, Chicago; secretary, W. F. Grinstead, Cairo. Officers of Section Three: chairman, Frank P. Norbury, Jacksonville; secretary, C. C. Carter, Rock Island. Peoria was selected as the place for holding the next annual meeting, May 21-23, 1901. The chairman of the committee on arrangements is J. D. Henry, Peoria.

THE JOURNAL OF THE
AMERICAN MEDICAL ASSOCIATION.
61 MARKET STREET, - CHICAGO.

SATURDAY, JUNE 2, 1900.

## THE PRESIDENT'S ADDRESS.

The address of Professor Keen, published elsewhere in this issue, is an admirable example of what a presidential address should be, and ideally fulfils the requirements he himself has laid down for such an occasion. The condition and prospects of the Association, as he shows, were never better, but there should be no relaxation of endeavor to still further enlarge its extent and usefulness. The special points alluded to are such that their mention is timely, and we trust his suggestions will bear good fruit in the future. The recommendation that action be taken looking to an early completion of the Rush monument fund is one that should meet with general approval. There is the more reason for this, as he says, since as American physicians we should wish to not let an American patriot and statesman as well as physician go unhonored when a sect has obtained a site from Congress for an expensive statue of its idol, who has certainly no such claims on us as Americans. While we can not make a deity of any man in the regular profession, we ought, under the circumstances, not to neglect our illustrious fellow citizen and confrère.

The defeat of the Gallinger antivivisection bill, which was largely due to Dr. Keen's efforts, is a matter for general congratulation, and we will do ill if we do not, as an Association, follow his advice as regards future efforts of the kind. The public needs something from time to time to counteract the persistent slanders on the profession by the antivivisectionists, and owe much to Dr. Keen for what he has done in this direction. The laity generally will not believe that medical men are inhumane, but a small section are apparently obtuse to the higher humanity that regards human suffering, and they are persistent in their endeavors to spread their views. We all need to do what we can to inculcate correct ideas in this matter.

The chief subject discussed by Dr. Keen, however, is the endowment of medical education and scientific research, and there is hardly one that could have been chosen that is more timely and important. While, as he points out, every other branch of education has been liberally endowed, and scientific study in the less practical lines has been and is being largely aided from the public funds, medical education stands in this regard almost on the same ground as it did fifty years ago. Apart from a very few and usually partial endowments, medical education is still conducted mainly as a source of direct or indirect profit to the instructors, and scientific investigation is largely a matter of private enthusiasm and expense. Dr. Keen shows us what ought to be, and his utterances will, we trust, serve to aid in its achievement.

The Association is to be, we hope and believe, the chief instrumentality in this as in the earlier reforms in medical education. We have now a higher and more rational standard of medical education, and what we now need is to eliminate the "corporation for profit" element and make our schools what they ought to be. The endowment of professorships, of laboratories, and of research fellowships are direct means to this end. Dr. Keen has pointed out the ways and it rests with us to follow them.

## CONCERNING THE REGENERATION OF NERVES.

Among those fundamental facts to which the neuron conception owes its adoption is the origin of the axis-cylinders as outgrowths from nerve-cells. Among the many investigators whose work has contributed to the proof of this are Ramon y Cajal, v. Kölliker, Retzius and v. Lenhossék. Considerable confusion, however, arose from the endeavor to adapt the processes of development to those of regeneration. This confusion was caused largely by the theories advanced by v. Bungner,[1] and his pupil, Wieting,[2] which assigned important rôles in regeneration to the cells of the sheath of Schwann.

The name "neuroblasts," applied by v. Bungner to the embryonic and proliferating cells that originate from Schwann's sheath after nerves are injured in diverse ways, carried with it the notion that the axis-cylinders were developed either from these cells directly or through their agency. Galeotti and Levi as well as P. Ziegler confirmed this belief, and Wieting not only corroborated it, but went a step further and declared that the myelin sheath likewise was regenerated from the cells of Schwann's sheath.

These opinions did not pass unchallenged. Stroebe and v. Notthaft soon correlated regeneration with development by insisting that new axis-cylinders are the product of an outgrowth from the old axis-cylinders at the proximal end of the severed nerve. The embryonic sheaths of Schwann became, according to Stroebe, "neurotized" by the sprouting axis-cylinders. During this time there naturally arose a diversity of views regarding the origin of the myelin sheath. The conceit advanced by Ranvier and Vignal, that myelin was formed from the cells of the nucleated sheath in a manner somewhat similar to the intracellular accumulation of fat, had obtained a foothold, for even v. Kölliker adopted it almost in its entirety in 1884 (Grundriss der Entwicklungsgeschichte). Stroebe, from his researches, concluded that myelin was formed about the young axis-cylinders as fast as they developed; Kölster and v. Notthaft, that the axis-cylinders are at first naked and only acquire a myelin sheath later; finally Wieting proclaimed the source of the myelin to be the new cells in Schwann's sheath.

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[1] Ueber die Degeneration und Regenerations Vorgänge an Nerven nach Verletzungen. Ziegler's Beiträge, x.

[2] Zur Frage der Regeneration der peripherischen Nerven. Ziegler's Beiträge, xxiii

Kőlster,[3] in a later work, has undertaken to decide this question. He found in the embryos of Salmo trutta (salmon) and Sterna hirunda, the ordinary sea tern, that the myelin sheath is present around the axis-cylinders of the developing anterior roots of the spinal nerves, long before there is any grouping about the nerves of those mesodermal cells destined to form Schwann's sheath. In the embryos of many animals, a delay in the production of myelin is observed; it is not formed until after the nucleated sheaths have enclosed the axis-cylinders; consequently the study of such embryos furnishes no definite data.

If the dictum ascribed to Galeotti and Levi, that "the mechanism of regeneration is the same for each tissue as its mode of development," be accepted, the results accruing from the work of Kőlster have an important bearing on the processes of repair of nerves. Kölster concludes, after commenting on the absence of nucleated sheaths about the medullated nerves in the adult spinal cord, that the myelinic sheath is as truly ectodermic in its origin as is the axis-cylinder.

Recently Gurnitsch,[4] while studying the development of primitive fibrillæ in young axis-cylinders, obtained a staining of the sheaths of Schwann at the commencement of their growths, at a period when they were not demonstrable by the ordinary staining methods. He found, by using Apathy's gold method, that soon after the sciatic nerve of the embryos of sheep becomes separated into secondary bundles, a network, which has its origin in the surrounding mesodermal cells, penetrates each bundle and divides it into compartments. Eventually this network surrounds each fiber and constitutes its nucleated sheath. Following this and at a later period, the endoneurium proper, which is to bind together the completely developed nerve fibers, is in its turn developed from the interfascicular connective tissue. The growth of Schwann's sheath was traced in both longitudinal and cross-sections of the embryonic sciatic nerves, and its exogenic mesodermal origin positively reaffirmed.

Whereas Kőlster, by the use of Weigert's staining method, found the young axis-cylinders surrounded with myelin at a period when they were entirely unprovided with nucleated sheaths, Gurnitsch, in the sciatic nerves of sheep embryos, found the nucleated sheath formed first. Nevertheless, Gurnitsch came to the same conclusion that Kölster had before him, viz., that the nucleated sheath takes no part in the production of myelin, for he found that the myelin was deposited in minute droplets at places some distance from the cells of the nucleated sheath, and that its formation did not in any degree keep pace with the development of the sheath of Schwann.

The results of these investigations illustrate that the advancement of embryology paves the way to a more complete understanding of changes that for us have a more special interest; for it certainly can be expected that future work will show still further that the reparative changes occurring in nerve fibers after injuries closely follow normal histogenesis.

## CONTRIBUTIONS TO THE SCIENCE OF MEDICINE BY THE PUPILS OF WILLIAM H. WELCH.

The pupils and friends of William H. Welch, professor of pathology, Johns Hopkins University, celebrated the twenty-fifth anniversary of his doctorate by presenting him with a copy of the volume bearing the titles at the head of this note. An event of this sort merits a little more than a passing word. In the first place, it is certainly gratifying to all interested in the progress of medicine in America that the custom of issuing a memorial volume—"Festschrift"—is coming into vogue. What better, more permanent, and more universally acceptable method is there by which to honor a great man or to commmemorate an important event than the publication of an appropriate book? A memorial of this sort is imperishable in more than one sense: libraries the world over will hand these books down to remotest posterity and the influence of the results of the original work, embodied in such a book as the one issued in the honor of Professor Welch, is permanent because of the additions thus made to science; because of the stimulus and the encouragement given the various authors and all workers in the same fields. A glance at the superb and handsome volume before us is sufficient to emphasize the truth of these statements.

There are 1066 pages; 37 separate articles by as many different contributors; and the majority of the articles are beautifully illustrated. The illustrations, we are happy to note, are American productions, and it is surely not too much to state that the illustrations compare favorably with the best of similar nature from other lands, both as regards the originals and the reproduction. The subjects treated deal generally with pathology, anatomy, and embryology. All the articles embody original work in these lines, of the highest order of excellence. The volume is one of which we may be proud, because it shows clearly that scientific medicine in America has safely reached such a stage of originality and productiveness in the development that it can not but have a marked influence on the medical science of the world. And this volume will undoubtedly long constitute a high-water mark in the scientific work of the Johns Hopkins school.

It is worthy of note that the articles, though largely representing the influence of one center, yet are so diversified and bre [illegible] character and scope that they [illegible] he sci [illegible] he teachings of any special

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[3] Beiträge zur Kentniss der Histogenese der peripheren Nerven, etc. Ziegler's Beiträge, xxvi, 1899.

[4] Die Histogenese der Schwannschen Scheide. Archiv für und Physiologie, Anat. Abth., 1900,

"school" in the narrow sense that this word is sometimes used to indicate the championship of a special doctrine or theory. In fact, the freedom from the domination of any single theory has always been a strong characteristic of the work emanating from the pupils of Professor Welch, as would be expected when we consider the broad and unprejudiced nature of his teachings. The work of the authors not now connected with the Baltimore institution serves to indicate the fact that the spirit of original research thrives in numerous centers in the United States, and that the Johns Hopkins Hospital Medical School has had a hand in training many of our best investigators and teachers.

The simultaneous publication of three volumes of the same general character—the Pepper memorial volume, the one in honor of Welch, and that in commemoration of Jacobi's 70th birthday and previously noted in The Journal is sure to strengthen the good name of scientific medicine at and away from home. We may congratulate ourselves that we have so worthy objects for such great distinction, and that the wherewithal is forthcoming with which to carry out undertakings of this kind in such a magnificent manner. A high standard has been created; the occasions are most appropriate and worthy, and we hope that future efforts of this nature may be of equally high order.

## THE ITALIAN SOCIETY FOR THE STUDY OF MALARIA.

The work of the Italian Society for the Study of Malaria has been noticed in these columns before;[1] the individual work of its distinguished members is familiar to all who are interested in malaria. The economic aspect of the malaria problem in Italy is of tremendous significance to that country, and in their efforts to solve it the zeal, ability, and the success of the Italian investigators, who have joined issues in this Society, have won the admiration of medical men all the world over.

The second annual report[2] of the president of the Society, Professor Celli, contains a succinct statement of the results of the year's work. Among the more important may be mentioned the demonstration that human malaria is undoubtedly carried and transmitted by a certain variety of mosquito, namely Anopheles, the distribution, habits, and biology of which have been thoroughly studied. Experiments have been made that show that human malaria is transmitted from man to man through this mosquito, and that malarial infections of certain animals are probably not transmissible to man.

The structure, the developmental cycles and the methods of reproduction of the malarial organisms in their human and their suctorial hosts have been quite clearly established. The epidemiology of malaria has been studied in the light of this new theory of its cause, the mosquito theory, and efforts made to determine the influence of atmospheric conditions, soil, water, and vegetation on the Anopheles and the spread of malaria. The mode of life of the laborer of the Roman Campagna has been studied in its relations to the disease. The epidemic year, with its recidivations, ends in June, but the new epidemic year begins in July from infections produced by the sting of the mosquito, which thus perpetuates the disease. Experiments have been carried out proving that quinin is without action on the sexual forms of the parasites, the forms that are most to be feared from the epidemiologic standpoint, and consequently it is hopeless to expect that this drug will exterminate the disease. Consequently, methods are now being sought that will destroy the mosquitoes or protect the skin from their bites; and at the same time others are engaged in studying immunity against malaria. It has been found that certain substances, such as methylene blue, produce immunity against experimental malaria. Mechanical protection of houses and of individuals against the entrance and the sting of mosquitoes has been accomplished to such an extent that during the coming malarial season more extensive prophylactic measures of this sort will be introduced on a large scale. Several popular works on malaria have been prepared under the auspices of the Society: the first volume of the scientific work accomplished by its members is being published; the more important results of this have already been published by the individual workers.

Enough has been said to show that this excellent Society is attacking the problem of malaria on a broad, scientific basis, and along all possible lines. In consideration of the small amount of money spent—about $2200 (13,000 lire)—it would seem that the Society has good reason to feel satisfied with the results achieved and to look into the future with confidence.

## HYPNOTISM AND MEDICINE.

In again calling attention to hypnotism we merely emphasize much that has already been said on the passing of a subject that yellow journalism and the advertising quack have relegated to a doubtful position. Absolute impersonality as to our views on hypnotism does not admit the disparagement of honest work that has for its object the breaking up of absurd notions on any subject and the consequent removal of obstacles to its advancement; but we confess that intelligent and lucid dissemination of psychologic medicine is needed in this country, where more than elsewhere perhaps, such knowledge has long been riotous or apathetic, and is presented either by enthusiastic ignorance or by a too confident conservatism. Much of this disintegrated and unsatisfactory condition complained of is owing to the obsolescent methods of the metaphysicians, who, being ignorant of neural morphology and physiology, do nothing to advance psychology. It is rather to those familiar with the newer methods and investigations of technical progress, having regard to the physiology of the sentient organism or the study of nerve function in general, based on observation and experiment, that we must look for advancement. Those informed in contemporary neurology see that we have entered on a new field already showing fertility in result.

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[1] The Journal, xxxii, April 8, 1899, p. 769.

[2] Centralbl. f. Bakt., Abth. 1, 1900, xxvii, 395.

Among many questions that suggest themselves in this relation we may ask: What becomes of the dipsomaniacs alleged to have been cured by hypnotism? We find but unsatisfactory answers in perusing the more recent hypnotic literature, which, by the way, is numerous and varied, there being in various languages nearly twelve hundred volumes on the subject, not to mention numberless pamphlets and journal articles. The work of Nils Posse, of Moll, and the papers of Dr. Bramwell. in *Brain* (Part iv, 1896), give about all that is known of the subject.

As to hypnotism in itself a variety of opinion exists; but it is a mattter of surprise that it attracts so much attention, especially in this country, where the post-office department is embarrassed by the immense mail of the charlatans who advertise to teach it by correspondence, and where the question of hypnotism has ever entered into legal medicine. After long and careful investigation, by the schools at both Nancy and Paris, this matter was some years ago dropped by the best neurologists as unworthy of serious notice, and many articles on the "passing of hypnotism" appeared in the medical journals. Moreover, for curative purposes the use of hypnotism is very limited and rarely useful, some authorities declaring its application useless, and often injurious.

Hypnotism is discredited by our best neurologists. At a late meeting of the American Neurological Association, in Washington, D. C., there was a general agreement to this effect, when one of its oldest and most distinguished members, who has had more experience with suggestive therapeutics than any other man in the United States, declared that he had never seen a case cured by hypnotism, unaccompanied by other means, and that in his opinion hypnotism is of so little therapeutic value that it ought to be banished from medicine.

## RHEUMATIC MYOCARDITIS.

It is a generally accepted fact, though at times perhaps it does not receive sufficient consideration, that the functional capability of the heart depends rather on the state of the myocardium than on the condition of the valvular apparatus. The effects of lesions of the valves, as manifested in obstruction or insufficiency, may be entirely neutralized or compensated for if the heart muscle be healthy, while on the other hand the most pronounced symptoms of circulatory failure may be present in the absence of any valvular defect if the myocardium be diseased.

The muscular wall of the heart may suffer in consequence of excessive physiologic demands on its powers, long continued or frequently repeated, or interference with its nutrient blood-supply, especially through the coronary arteries, or as a result of toxic or infectious processes. Rheumatism is known to be a common cause of endocarditis, but it is not commonly recognized as being responsible for changes in the myocardium. The latter may be brought about in part as a result of the high temperature, and in part by the action of toxic substances generated in the course of the disease, without further reference to that which results by extension of the inflammatory process when endocarditis or pericarditis has been set up. Some observations on the influence of rheumatism in the etiology of myocarditis are recorded by Fisher,[1] and some illustrative cases are related. A large heart, weighing 21 ounces, obtained from the body of a man, 18 years old, exhibited in addition to old thickening of the segments of the aortic valve, numerous grayish spots of irregular shape on the inner surface of the left ventricle; these, on section, were found to extend through to the pericardial surface. The heart from a child, 4½ months old, and dead from bronchopneumonia, exhibited aortic valvular disease and obstruction, together with increase in the interstitial connective tissue of the heart muscle. In the heart from a boy, 12 years old, areas of myocardial degeneration and hyperplasia of the interstitial connective tissue were found in conjunction with mitral obstruction. The heart from another boy, 8 years old, exhibited after death, thickening of the aortic segments and of the cusps of the mitral valve, with recent vegetations on the aortic segments, and on microscopic examination myocarditis with vascular injection and hyperplasia of the interstitial connective tissue. In some of these cases rheumatism had definitely been present, but in others its previous presence was assumed from the existence of valvular lesions. Symptoms of myocarditis were also observed in a boy, 9 years old, following an attack of chorea and also in a girl of 8 years, following an attack of rheumatism. Tachycardia was seen in a girl of 4, and in a boy of 8 years, following an attack of rheumatism, and mild attacks of angina occurred in a young woman, following an attack of rheumatism.

## THE PLAGUE.

The U. S. Treasury Department has published and is distributing a pamphlet of information about the bubonic plague, by Dr. Walter Wyman, supervising surgeon general of the U. S. Marine-Hospital Service. It is intended as a practical guide to the public and to sanitary authorities, and gives a very fair general idea of the disorder, its mode of infection and the approved methods of guarding against it. The instructions are reasonably full, and the pamphlet will be a serviceable guide to local officials, to be supplemented with all other useful data that may be obtainable. There are many questions of the plague not yet worked out, and it is fortunate that some of these are in regard to facts of immunity and lessened virulence in our race and under the conditions in which we live. There is ample ground, however, for all reasonable precautions, as the disease at its best is a formidable problem for sanitarians. Its obtaining a foothold in this country even locally would be a national misfortune.

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[1] Bristol Medico-Chirurgical Jour., March, 1900, p. 16

### THE GALASSI-GIFFORD PUPILARY REACTION.

Under the heading, "the Westphal-Piltz Pupilary Reflex," a contemporary[1] notices a phenomenon first described by Galassi and later independently discovered by Gifford, of Omaha. Galassi's observation was published only in society proceedings, so that it was easily overlooked, but Gifford's paper was published in a well-known special journal that ought to have been familiar to Westphal as well as to the distinguished ophthalmologist who edits our contemporary. In the latest issue of the *Archives of Ophthalmology*, where his original paper appeared, Gifford takes up the subject anew, doing full justice to Galassi's priority. He, however, himself noticed a little more than the Italian observer, and if we are to have a discoverer's name attached to the phenomenon it should be the Galassi, or the Galassi-Gifford, instead of the Westphal-Piltz reflex, for which term there is no warrant whatever except that it has the "made in Germany" stamp. We have noticed this matter before, but the occasion seems to call for its mention again.

### VAUGHAN ON MILITARY TYPHOID FEVER.

The Oration on State Medicine, by Dr. Vaughan, in this week's Journal, is one of interest as giving a summary of the forthcoming official report on the occurrence of typhoid fever among the troops in our late war. If the conflict was too brief or on too small a scale and too unequal to do much for the solution of many military problems it has given us some experiences that we can, if we are wise, use to our advantage should similar occasion rise in the future. The military typhoid in the camps is a part of the experience, and a very important one, causing, as it did, about 80 per cent. of the total mortality of the war. Dr. Vaughan shows that the chief sanitary sin was the pollution of camps and that for this as well as for their unsuitable selections the non-medical officers were largely if not solely responsible. Army surgeons can recommend, not direct, in such matters, and he makes the very suitable suggestion that in our national military school more attention be paid to instruction in army and general hygiene than has been given in the past. We would emphasize this and the necessary corollary that the officers of the state militias, who are likely to be more or less responsible in case of war, be similarly instructed. To allow the lessons, some of them very expensive ones, of the late war to go unheeded would be worse than foolish, it would be criminal, and the one here treated is one of the most important. The fact that typhoid fever is without exception a disease of armies is probably best explained, as is done by Vaughan, by the fact that we have it always with us and that collections of men under camp conditions especially favor its outbreak. The facts recently acquired as to the possible infectiousness of the urine for long periods after an attack explain very many of the puzzling questions of the disease. Dr. Vaughan's address, and still more the completed report of which it is a summary, will be classic among the studies of this infection.

### FORMALDEHYDE AND MILK

At a late meeting of the Chicago Medical Society the subject of infant feeding was the order of the evening, and the discussion developed some interesting points. Dr. A. R. Reynolds, health commissioner of the city, took strong grounds against the use of formaldehyde in milk, a custom which he thought was becoming general and productive of evil. The subject of dangerous food adulteration is one of the most practical and important with which we have to deal and the more universally used the food the greater its importance. Milk adulteration, therefore, takes first rank as a sanitary question, and while harmless adulterations such as water are often flippantly alluded to, one can not but be serious when there is even a suspicion that the fraud is not merely a financial one, but one that threatens life and health. Of late it is said that under such names as "freezine," "preservaline," etc., there has been extensive use of such drugs as boric acid and formaldehyde in treating milk so as to render it longer marketable. It is claimed also that they are employed in such quantity as to be prejudicial to health, especially of infants, who are naturally the most general if not the largest consumers of milk, and one health inspector is quoted as expressing the belief that during the last year "fully 1000 children have been killed in Chicago by 'doctored' milk." If this is true even to the extent of one-tenth of 1 per cent. it is a matter that can not receive too early attention. Experiment made abroad seem to indicate that formaldehyde and boric acid, the substances usually employed, are prejudicial to health, if taken even in small quantities. The question, however, can not be regarded as absolutely settled, for some authorities claim that there is a safer proportion in which they can be used to advantage and that thus employed they are less dangerous than the practices of Pasteurizing or sterilizing by heat, so commonly employed. This does not do away, however, with the danger from their use by irresponsible dealers; whether Annett or Liebreich and Moechel are right, it is best to be on the safe side; and until further investigation has established the exact amount that it is safe to use, and established a standard test for the same, our health boards are only doing their duty in looking into the subject and excluding milks thus treated from public use if there is any evidence or reasonable suspicion of their harmfulness.

## Association News.

The Atlantic City Meeting.—The fifty-first annual meeting of the American Medical Association, in session at Atlantic City, N. J., June 5-8, has proved to be one of the most successful in the Association's history. The Sections were all well patronized and did excellent work. Registration up to the evening of June 6 (time of going to press), was over two thousand. The Senn Medal was awarded to Dr. F. Gregory Connell, of Chicago, and the Association Medal to Dr. A. L. Benedict, of Buffalo, N. Y. The newly-elected officers are: president, Charles A. L. Reed, Cincinnati; vice-presidents, A. W. Calhoun, of Georgia; A. A. Woodhull, of Denver; Philip Marvel, of Atlantic City, and Wm. E. Quine, of Chicago. The newly-elected trustees are: J. M. Mathews, Louisville, Ky.; E. F. Ingals, Chicago; W. L. Rodman, Philadelphia, and M. F. Porter, Fort Wayne, Ind. At the 1901 meeting the Oration in Surgery will be delivered by Dr. John A. Wyeth, of New York City; the Oration in Medicine by N. S. Davis, Jr., of Chicago; the Oration in State Medicine by Dr. George M. Kober, of Washington, D.C.

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[1] Phil. Med. Jour., May 26.

## Medical News.

OFFICIAL information has been received at the War Department, Washington, D.C., that the Government of the Straits Settlements, by a notification published April 5 last, proclaimed Manila an infected port, on account of the presence of bubonic plague.

AT THE recent session of the State and Provincial Boards of Health of North America, at Atlantic City, N. J., the following officers were chosen: president, Dr. C. O. Probst, Ohio; vice-president, Dr. Henry Mitchell, New Jersey; secretary, Dr. C. L. Swartz, Rhode Island; treasurer, Dr. J. A. Egan, Illinois.

A BANQUET was tendered Professor von Bergmann, of Berlin, recently, by 300 of his friends in the profession. Liebreich made the principal address, paying special homage to von Bergmann as a leader in the fight which physicians have to wage constantly to obtain their rights.

THE UNITED STATES postal officials arrested the officers of the so-called "Metropolitan Medical College" of Chicago, on June 4, and they are to have a hearing on the charge of fraudulent use of the mails on the 14th. This institution is the successor of the "Independent Medical College" and the "National Health University," previously commented on in THE JOURNAL, and is charged with the same iniquitous performance as its predecessors.

THE STUDY OF MALARIA.—A permanent committee on malaria has been appointed by the Paris Academy of Medicine, consisting of Laveran, Kelsch, Blanchard, Railluet and Vallin, "for the study of paludism." A resolution was adopted urging that a scientific mission be sent to Algeria to study the question of transmission of malaria by mosquitoes, and prophylactic measures. England now has two schools and two "expeditions;" Germany, one school and the Koch expedition; Italy has a society for the study of malaria (see editorial columns this week); Belgium has recently founded a laboratory in the Congo, and special courses for instruction in tropical diseases have been opened in Holland and in this country. France has been hitherto content with Laveran's discovery of the malarial parasite as her contribution to science in this line.

FREEDOM OF PORTO RICO FROM SMALLPOX.—The prevalence of smallpox in Porto Rico shortly after the occupation of the island by United States troops was such that the neighboring islands declared a quarantine of fifteen days against Ponce. The disease existed in every direction and the military authorities determined to take the cases in hand and if possible remedy the evil. A general vaccination of the population was ordered and systematically carried into effect, vaccin being provided from a farm established at Coamo Springs. The work was declared finished June 30, 1899. No announcement of the results of the vaccination has as yet been made, but in a letter recently received at the office of the Surgeon-General of the Army, Major J. Van R. Hoff, chief surgeon of the military department and president of the superior board of health, states that no death from smallpox has been reported from any part of the island during the past seven months.

QUARANTINE AGAINST EGYPTIAN PORTS.—In a communication dated May 8, the consul of the United States at Malta reported that every passenger arriving there from any Mediterranean port east of Gibraltar must, before being allowed to land, declare on oath before an inspector of marine police or other superior officers, that he has not been in Egypt within twelve days. This measure is rendered necessary owing to the spread of smallpox in Egypt, particularly at Cairo, and to an outbreak of plague which has been officially reported. Up to the present time it has been learned that there have been three cases of plague at Port Said and two at Suakim. A few days ago two cases of black smallpox were discovered at St. Julians, a suburb of Valletta, which were directly traceable to persons just arrived from Egypt. A person who was connected with a family at St. Julians, resided in a lodging house at Valletta and was attacked with the disease after the St. Julians discovery. The local government at once took heroic measures and the latter patient and all of the occupants of the house were removed to the government lazaretto. One of the St. Julians cases terminated in death. The local health authorities are fully up to date in their methods and, owing to their promptness in dealing with the above cases, there is no danger of a spread of the disease. Inasmuch as one or more of our vessels from Manila will be returning to the United States by way of the Suez Canal in a few weeks, it might be well to warn them in regard to holding communication with Egyptian ports, as, judging from the strict quarantine laws put in force at various Mediterranean ports last summer, it might prove awkward should they desire to put in at ports between Port Said and Gibraltar. There is a strong probability, from present indications, that even Aden will be quarantined.

### PENNSYLVANIA.

BY THE will of Henry M. Curry, who died in Pittsburg a short time ago, $20,000 has been given the Pittsburg Hospital for Children.

### Philadelphia.

DR. THOMAS G. MORTON has taken a cottage at Cape May for the summer.

DR. HOWARD KAUCHER, of the Medico-Chirurgical College, and Dr. W. Pearson, of the Jefferson, have been appointed resident physicians of the Harrisburg Hospital.

THE ANNUAL commencement exercises of the Medico-Chirurgical College were held May 19, and fifty-nine graduates received diplomas.

A CASE of diphtheria has been reported in the Elwood Public School in the Twenty-second ward, and the building has been closed by the Board of Health in order that the proper preventive measures may be taken.

NOTICE HAS been given of the consolidation of the Mt. Sinai Hospital and the Franklin Free Dispensary at 236-238 Pine Street. This movement tends toward the establishment of a hospital for the downtown Jewish poor.

BEQUESTS TO UNIVERSITY OF PENNSYLVANIA.

The University has received a gift of $20,000 from Mr. John G. Carruth, toward the dormitory fund. This being a memorial to his daughter, the building will be known as the Carruth Memorial. Mr. Dundas Lippincott has also given $20,000 as an endowment of a new house to perpetuate the memory of the father and son.

JEWISH HOSPITAL.

According to the annual report of the Jewish Hospital Association, the number of supporters is 1370; divided into four classes, viz.: 1000 members, 130 contributors, 190 patrons, and 50 friends. Last year there were 30,350 visits made to the Mathilde Adler Loeb Dispensary, and 25,665 prescriptions compounded. Within the past few days $7500 has been given this department by Mr. August Loeb. During the past year, 901 patients have been treated in the hospital, an increase of 75 over the previous year; and 11,433 patients in the out-patient department; 60,624 days' support has been given those in the hospital and incurable wards, at an expense of $41,166. The average cost per day was $1.10. The total receipts were $62,775.54, and the expense $62,513.62. The Lucien Moss Home for Incurables showed receipts of $261,393.75, and disbursements of $255,054.67.

Mr. W. B. Saunders announces that he has associated with him in business Mr. F. L. Hopkins and Mr. T. F. Dagney. The former has been manager heretofore of the subscription, and the latter of the publication, department. The firm will hereafter be known as W. B. Saunders & Co.

## ILLINOIS.

The women of the hospital board in Champaign made $700, May 26, by having the trolley lines in charge for that day, and providing various forms of amusement and entertainment in different parts of the city.

### Chicago.

The Wesley Hospital passed into the hands of the Deaconess' Society of the Methodist Episcopal Church, June 11.

Dr. A. H. Ferguson has just recovered from illness due to infection received during an operation for the removal of gangrene.

At the commencement exercises of the Training School for Nurses of the Mary Thompson Hospital, the address was made by Dr. Sarah H. Stevenson, and the diplomas were presented by Dr. Lucy Waite.

The Physicians' Club of Chicago held a business meeting and banquet recently and elected the following officers: chairman, Wm. H. Wilder; secretary, L. Harrison Mettler; treasurer, L. Blake Baldwin; directors to fill vacancies, John M. Dodson, M. W. Bacon and John L. Porter.

## MARYLAND.

### Baltimore.

Dr. J. Royston Green has resigned the position of resident physician of the Hospital for Consumptives and will enter on private practice.

The Johns Hopkins Hospital Training School graduated twenty-four nurses on June 1. President MacAllister, of Drexel Institute (Philadelphia) made the address on "The Practical Education in Professional Life."

The University of Maryland has filled the vacancy in the chair of therapeutics, created by the resignation of Dr. I. Edmondson-Atkinson, by assigning that department to Dr. Charles W. Mitchell, who will fill both this and the chair of pediatrics.

Dr. L. Benderly has been appointed assistant resident physician at the Hebrew Hospital.

FOR SHIPPING DEAD BODY.

William Divino, late janitor at the College of Physicians and Surgeons, was tried in the Criminal Court, May 28 and 29, on the charge of unlawfully shipping a dead body from Baltimore to Sioux City, Iowa, last January, and was found guilty. The maximum penalty is five years in jail. A motion was made for a new trial. As mentioned in this correspondence at the time, a man died from injury in the City Hospital and his body was sent to the morgue. No one claiming it, after two weeks, it was assigned to the College of Physicians and Surgeons, where Divino, custodian of the dissecting room, received and receipted for it. Later it was discovered in a box in the Sioux City Express Office.

## NEW JERSEY.

A physician living at Morrisville (Pa.) was arrested in Trenton, May 26, for practicing medicine without a license and held in $500 bail. It is claimed that the law is not violated when a physician who practices in another state is called to see a patient who may be ill in an adjoining state. Another claim is made that the party has a license which will be shown at the proper time.

### Newark.

The opening of St. James' Hospital occurred May 23. Dr. Augustus V. Wendel will be chief of the medical staff.

The city Board of Health has taken initiatory steps toward the erection of a hospital for the care and treatment of communicable diseases. Dr. Herman Herold was made chairman of the committee, of which the other members are Drs. Frederick Becker and William S. Disbrow.

## OHIO.

### Cincinnati.

At the regular monthly meeting of the medical staff of the Cincinnati Hospital. Dr. G. A. Fackler was elected president of the staff for the ensuing year.

A conference has been arranged between the secretaries of the State Boards of Health of Ohio and Kentucky, and the city health officers of Cincinnati and Covington, to be held in Cincinnati. It is the intention to establish a mutual relationship between the two states for the better control of contagious diseases.

## MASSACHUSETTS.

The board of health in Boston has ordered that hereafter every physician must report every case of consumption that comes to his notice, as he would any other form of contagious disease.

At the annual meeting of the medical staff of the Franklin County Hospital, May 17, the following officers were elected: president, Dr. A. C. Walker, Greenfield; vice-president, Dr. Mary P. Dole, Greenfield; secretary, Dr. B. P. Croft.

The new surgical building of the New England Hospital for Women and Children, at Roxbury, was dedicated May 21. Short addresses were made by Dr. Marie Zakozewska, the founder of the hospital; Dr. Elizabeth Keller and Rev. E. L. Clark, chairman of the building committee.

## DISTRICT OF COLUMBIA.

Recently appointed physicians to Georgetown University Hospital are E. P. Potbury, Jr., and John A. O'Donoghue.

The Seventy-ninth annual commencement exercises of Columbian University were held May 29. There were thirty-three graduates in medicine and thirteen in dentistry. The address was delivered by Dr. W. F. R. Phillips, of the faculty.

At the commencement exercises of the medical department of University of Georgetown, held May 22, twenty-one graduates received their degrees. The address to the graduates was made by Prof. Daniel R. Brower, of Chicago, and the degrees were conferred by Rev. John D. Whitney.

## MICHIGAN.

The fourth annual commencement of the Saginaw Valley Medical College was held in Saginaw, May 22.

At the commencement exercises of the Grand Rapids Medical College, held June 1, a class of twelve was graduated. Dr. Clarence White and Dr. Wm. Fuller made addresses, and Dr. E. G. Edwards presented the diplomas.

## INDIANA.

PROPOSED CHANGE IN MEDICAL LAWS.

The State Board of Medical Examination and Registration held a meeting at Lafayette, May 29, and decided to recommend that the laws governing the practice of medicine be changed, so that a diploma shall not be recognized as a proof of eligibility to practice medicine, but only as evidence entitling the holder to examination. The Board will also ask the next legislature to enact a law giving a clearer definition of the phrase "practice of medicine."

## CALIFORNIA.

ST. LUKE'S Hospital, San Francisco, is to have a new wing, to cost $50,000.

FIFTEEN were graduated from the California Medical College at the recent commencement exercises. One of the number was a Chinese student.

## AUSTRALIA.

### SYDNEY'S PLAGUE.

Various portions of the city are still (May 5) under more or less quarantine, although $150 a week is spent in placing it in better sanitary condition. March 27 the work of cleansing Sydney began, about 800 men being employed, and the number increased from time to time. In the quarantined area all able-bodied men are engaged to help the contractors, and prophylactic serum has been used on all employees. Seven hundred tons of debris were removed from yards and houses the first day. A price is placed upon rats in almost every portion of Australia. The epidemic seems to follow the line of sewage, and it is though that the rats are forced, by the use of disinfectants, up the sewers to the heart of the city. The first plague case was that of a man who for four months had been almost exclusively employed in carting wood from the city warehouse to a wharf. During this time four steamships from Hongkong, with Chinese crews, had lain at the wharf; one had been there from January 9 till January 20, and the first case was on January 19.

The record of cases reported stands as follows:

| | Cases. | Contacts. | Deaths. |
|---|---|---|---|
| January | 1 | 10 | 0 |
| February | 3 | 32 | 2 |
| March | 52 | 259 | 15 |
| April | 112 | 680 | 38 |
| May 1 | 4 | 13 | 2 |
| May 2 | 11 | 11 | 2 |
| May 3 | 6 | 26 | 4 |
| May 4 | 6 | 26 | 0 |
| Total | 195 | 1061 | 63 |

There are now 99 patients and 25 "contacts" in quarantine. Out of the large number of the latter, there have been only about 10 who took the infection. Yersin serum is not used, there being none in the city. Dr. Frank Tidswell, the government's bacteriologist, and Dr. Ashburton Thompson, the president of the Board of Health, have been visited by representatives from the various colonies, all of which are striving to stamp the plague out of Australia. The Citizens' Vigilant Committee has asked the medical profession to give lectures in various parts of the city instructing the people in all measures of prevention.

## CANADA.

### REGARDING BAKING-POWDERS.

The Department of Inland Revenue at Ottawa has just issued a bulletin dealing with the subject of baking-powders. In it are given the details of the analysis of 156 samples purchased throughout Canada. Out of this number only 44 were free from alum; or, in other words, over 70 per cent. of the baking-powders sold in this country contain alum. A large part of this bulletin is taken up with a study of the scientific evidence, having to do with the physiologic effects of the ingredient, and especially so with data which has accumulated since 1880, the date when the last bulletin on this subject was issued. While many manufacturers and some chemists claim that in a well-made alum powder, no alum as such remains in the bread, but hydrate and phosphate of alumina, this has been studied most carefully, and the results of the investigations are thus given: "The question of the harmlessness of alumina, that is the hydrate, has, however, not been proved, and the most that can be said for it is that the case is still unsettled. The health of a nation is too serious a matter to be imperiled lightly, and if it be possible to secure prohibitory legislation against alum baking-powders, it is all the more desirable that manufacturers of these powders should be required to state their composition on the package, so that consumers may know what they buy and use. Until it is demonstrated that hydrate of a (in the case of alum-phosphate powders) phosphate are harmless substances in food, the use of alum baking-powders is attended with a very serious risk; while not even the proving of these substances harmless would establish the safety of these powders, since for reasons already mentioned, it is quite uncertain that the reaction is completed in the bread."

### CANADA AND THE BUBONIC PLAGUE.

The recent outbreak of the plague at Honolulu and its appearance at San Francisco and the Diamond Head Quarantine Station has directed the eyes of all Canada to Williams Head, anxiously inquiring what facilities there are on the Pacific Coast off British Columbia for the protection of the public health of Canada. The superintendent in charge of this station is Dr. Watt, a man who is alert and thoroughly alive to his duty and who has long ago expressed himself that no contagion will find him unprepared to meet it. The equipment of this station is complete and thoroughly modern. The hospitals and disinfecting houses and depots of detention are all furnished and ready for immediate use. The mechanical department is also up to date in every particular, and it is said to be a very interesting sight during the stay of an Oriental liner, to see hundreds of Chinese treated to their first bath in Canada—a bath from which disease germs never come forth. The system in vogue for the purification of the ships and their baggage is that by sulphur fumes; and the ropes holding the vessels to the wharf are carefully covered with funnel-like rat-catchers, to prevent the landing of any of these spreaders of the plague: 8000 gallons of muriatic acid and bichlorid of mercury is ready at any moment in an immense tank, to be sprayed on the exposed surfaces of ships where fumigations would not be feasible. The formaldehyde process is also in use. The hospital buildings are arranged on the pavilion plan, and very complete in all their arrangements, the better class of passengers, if necessary, being allotted separate accommodations. It will no doubt be eminently interesting as well as perfectly satisfastory to the citizens of the United States to know that Canada has such admirable facilities for coping and contending with any dreaded foreign pestilence such as the bubonic plague.

### CANADIAN ARMY MEDICAL SERVICES.

It is very satisfactory to be able to report that the Government of Canada has been at last successful in placing this service on a proper footing. From the time of the Confederation, in 1867, the medical officer has practically remained in the position in which that era found him, a more or less ornamental appendage to the battalion claiming his services. In July last, the militia department issued a general order, and the scheme then outlined has now become established. The medical staff now consists of one colonel—director-general, 7 lieutenant-colonels, 17 majors, 22 captains, and 25 lieutenants. For the purposes of promotion, the officers of the army medical staff are considered as a distinct branch—under the command of the director-general—and promotion will take place from rank to rank on the same principle as that in a regiment or corps. Five bearer companies and five field hospitals were established on a peace footing. A bearer company will consist of 1 major, 2 captains or lieutenants, 1 sergeant-major, 1 quartermaster sergeant, 1 staff sergeant compounder, 4 sergeants, 1 bugler, 4 corporals, and 20 privates. The Halifax Bearer Company—No. 1 Bearer Company—is, however, to be kept on a war footing of sixty-four of all ranks. A field hospital will consist of 1 major, 2 captains or lieutenants, 1 sergeant-major, 2 staff sergeants, 2 compounders, 2 corporals, and 14 privates. Schools are to be held without delay in order to enable officers to qualify, and they will be in charge of officers who have already qualified at the depot of the Royal Army Medical Corps at Aldershot, England. These schools will last a week and terminate with an examination. Two classes of certificates will be given, viz., a first-class for officers making 70 per cent. of the whole number of marks and not less than 50 per cent. in any one subject: and a second-class to those making 50 per cent of the total, or not less than 33 per cent. on any one subject. In this way it is hoped that all the medical officers of the [illegible] w[illegible] on become properly qualified in their duties and [illegible] efficient and capable.

### PROGRE[illegible] FOR INEBRIATES.

As a result of [illegible] leading members of the [illegible] on in Tor[illegible] Premier of the provvince, the Hon. Dr. Ross, a bill has been drafted and will be introduced at the next meeting of the local house of parliament. It will provide that in all cities in Ontario, having a population of 20,000 or over, a probation officer will be appointed to take the supervision of drunkards who have been placed on probation by the courts on suspended sentence. A medical superintendent shall be appointed by the government to inaugurate and superintend the medical treatment of inebriates and dipsomaniacs and assist in establishing, for their treatment, cottage hospitals and special wards in general hospitals throughout the province. Then the government will by this legislation be authorized to make grants for this work for special hospitals and for special wards in hospitals already existing—a bonus of 25 per cent. of the cost of the building or special equipment, as the case may be; then an additional special grant of ten cents a day over and above the usual per capita grant to all hospital patients; then an extra grant of forty cents a day shall be allowed for a period of seven days, for cases of acute alcoholism. The medical treatment is not to be considered as a charity but as a loan, to be repaid subsequent to treatment and while still on probation. Able-bodied chronic drunkards, instead of being fined and sent to jail, shall be sent to the central prison in Toronto for not less than six months, and all female drunkards are to be sent to the Mercer Reformatory in Toronto on cumulative sentences. Chronic drunkards, male or female, not able-bodied, are to be provided for in county or city houses of refuge. The bill further provides for the appointment of three physicians of standing, by the government, to constitute a committee of consultation to co-operate with the superintendent in inaugurating and carrying out the purposes of the bill.

## HAWAIIAN ISLANDS.

Fifty-two lepers have been received at the Kalihi detention hospital during the last seven months. Forty of these were taken on May 22, for Molokai, by the steamer *Lehua*, which makes a semi-annual visit to the island.

### HONOLULU'S PLAGUE.

The plague in Honolulu is a thing of the past. The quarantine was raised on April 30, no new cases having developed from March 31 to that date. The yellow flag had been flying over the city for nearly 4½ months, and during that time over two hundred post-mortem examinations were made of suspected cases. Of this number sixty were found to be genuine plague. These examinations were made by Dr. Hoffman, the city pathologist of the Board of Health; to him and Dr. Garvin, the first-call physician, great praise is due, not only for their unceasing labors during the epidemic, but for their wisdom in the measures taken to rid the city of contagion. Though communication with the outside world was restored April 30, the burned district—Chinatown and its environs—remained quarantined against the rest of the city until the middle of May, although bacteriologic investigation of the soil of this district had first been made, as previously noted in The Journal, and no bubonic plague germs had been found. As the plague is reported from several places in Japan, and has existed for some time in Sydney, extreme vigilance has been maintained at the water-front, a floating quarantine wharf being provided, at which all in-coming vessels are required to land. The lines are provided with rat-guards. In the process of fumigation all rats in the cargo are likely to be killed, but to prevent the escape of any to land the cargo is rehandled and fumigated in the warehouse on the floating wharf. A movement is on foot to make a public park of the burned district. The effect of quarantine on the sugar exports from Honolulu is shown by the fact that there were only 72,617,677 pounds exported during the first three months, while in the corresponding periods of 1899 the exports were nearly 118,000,000 pounds.

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According to the *St. Petersburg Med. Woch.*, the Russian railroads are to be equipped with special cars for the transportation of sick persons. They are to be made with three separate compartments, one for infectious, one for ordinary diseases and one for insane patients.

# Correspondence.

## Medicine in the Far East.

Vienna, Austria, April 20, 1900.

### BOMBAY.

*To the Editor:*—Next to Calcutta, Bombay is the seat of the largest medical school in India. There are about 400 medical students in attendance at the Grant Medical College there, and the English members of the faculty think the class is too large, and that some measures should be adopted to reduce its numbers.

### THE JAMSETJEE JEEJEEBHOY HOSPITAL.

This is the largest institution of its kind I have seen in India. There is a separate set of buildings for gynecologic and lying-in cases, and a separate staff for these branches of work. Outside of this, however, Dr. Hatch, who has charge of the main hospital, does all manner of work, including that on the eye, nose and throat, as well as general medicine and surgery.

Among the first patients I saw with Dr. Hatch was a Parsee girl, suffering from tetanus, where the source of infection had been through holes punctured in her ears for ear-rings. Accurate statistics have been kept of the cases of tetanus treated in this hospital from 1849 to 1897. The average has been about 40 each year, or a total of 1900 patients, of whom 1090 have died and 810 have recovered. During all this period the treatment has changed from time to time as new remedies came into vogue, but the results have been nearly the same. These statistics have led Dr. Hatch to the conclusion that as far as curative agents are concerned, all the remedies so far used for the treatment of this disease are equally worthless. He uses chloral, the bromids and opium to control the spasms, but has no faith in any of these agents in lessening the mortality of the complaint. He has had considerable experience with the tetanus antitoxin and is outspoken in his condemnation of this agent. He says that in bad cases it does no good, and in the mild ones, he has seen it do harm.

I saw Dr. Hatch operate for an abscess of the liver, of which disease I saw a half dozen cases in his wards. He claims that the precaution taken by many surgeons to divide the operation into two stages in order to secure a union between the two surfaces of the peritoneum, is entirely unnecessary. He opens up the pus cavity freely, and then protects the peritoneal one by packing gauze around the incision. The aspiration of the liver, for whatever purpose it may be done, the Doctor looks upon as a dangerous procedure, and gave me several instances where death had occurred from hemorrhage following this.

I saw more cases of ununited fractures in a morning's stroll through the wards of Jamsetjee Jeejeebhoy Hospital than one would find in a western institution of the same size in a decade. Dr. Hatch attributes this unfortunate occurrence to the low vitality of his patients, in whom the reparative processes, after injuries, are below par. I am, with certain restrictions, a warm advocate of Championniere's ambulatory treatment of fractures, and believe that it is in just such cases as these illy nourished Indians that early passive motion and massage would assist the processes of repair and lead to better results. For some reason that I could hardly attribute to a constitutional dyscrasia on the part of the patient, whenever an operation was done for the relief of these cases an open suppurating wound followed.

Among the diseases for which the patients who enter this hospital are treated tuberculosis heads the list. Following this, in nearly the same proportion, are dysentery and malarial complaints.

There is a fine series of pavilions connected with this hospital for the care and treatment of gynecologic and lying-in cases. In Dr. Demmick, who has charge of these departments, I found an energetic and up-to-date man. They confine about 400 women annually. I saw, in a single day, more cases of puerperal infection than one would see in the great wards of the Allgemeines Krankenhaus in Vienna in six months. Dr. Demmick apologized to me for this unfortunate condition of things, and attributed it in part to the carelessness of his assistants, but more especially to the mismanagement of the cases before they entered the hospital. Here in India, as in China, the practice of obstetrics is almost entirely in the hands of midwives. In China, this midwife, in the management of her cases, does not in any way attempt to interfere. In India, however, nearly every one of these women has some secret nostrum consisting of a salve, ointment, or powder that she introduces into the vagina just before or during labor, which they claim has the power to dilate the womb, as well as produce a traction downward that aids in the delivery of the child.

These applications are filthy compounds, and after their use, infection often follows, and it is from this class of cases that Dr. Demmick claims most of his child-bed fever originates. The Doctor has great faith in antistreptococcus serum in the treatment of puerperal infection, a faith that my experience with the remedy does not sustain, for while I have seen it do harm, I have never seen it do any good. Locally, he treats his cases by carbolized vaginal injections, meddling but little with the uterine cavity. He gives 5-grain doses of the carbonate of guaiacol. In the obstetric wards of this hospital I saw a case of tetanus following delivery, which, owing to the fact that the native women are mostly delivered on the ground, is not an unfrequent accident. The cases, however, are generally milder in form, and more recoveries occur than when the infection is introduced into the system through other avenues.

The female wards here were full of dysenteric cases, which Dr. Demmick treats by the administration of *hobarrhena antidysenterica*, an Indian vegetable drug, that, mixed with aromatics, is the active agent contained in the numerous nostrums that are sold in India for the cure of bowel troubles.

### GOKALDAS HOSPITAL.

This hospital is named after a rich Parsee who built it and gave it to the British government on condition that the latter should run and support it. It is the best arranged, from a sanitary point of view, of anything of its kind that I have seen in all India. The floors are all tiled, the walls calcimined and the ventilation most perfect. The cots on which the patients lie are made of iron, covered with a straw mat and a single sheet. These Indians all prefer a hard bed and usually want no pillows under their heads. Dr. Henderson, who has charge of this hospital, belongs to the British sanitary service, and in the line of his duty there must play the rôle of physician, surgeon, oculist, aurist, and in fact, practice every department known to medicine.

I saw another case of tetanus there, which Dr. Henderson was treating with large doses of carbolic acid hypodermically, and keeping the patient profoundly under the influence of chloral. In carefully looking over the mortality statistics of tetanus in India, one will be struck by the fact that the disease is less fatal than it is in the West. This can be accounted for in part by the less impressibility of the nervous system of the Indian, as well as the milder form of the disease as it prevails here. I saw in this hospital several cases of ununited fractures, and an open, suppurating wound was a complication of every case in which an operation had been done for its relief.

Among the native Indians there are no medical colleges, and medicine is nowhere taught in a systematic manner. They have, however, a large amount of ancient medical literature, written by eighteen eminent authors, which has been unchanged for centuries, and which is looked upon as containing all that is worth knowing in the science of medicine. These works are all written in Sanscrit, and not one in a hundred who practice medicine in India can read this classic tongue. The healing art as practiced by ninety-nine out of every hundred who follow this calling, in this vast empire, is a pure, unmixed quackery. Each one of these practitioners claims to have in his possession remedies that are unknown to other members of the craft, which he hands down to his son, who, like himself, keeps them a family secret. Their materia medica is recruited largely from the vegetable kingdom, though they use copper and iron, and to those who can pay for the luxury they administer gold, pearls and corals. Hemorrhoids form a very common complaint among the natives, and the "pile" doctor, like his prototype in the West, roams from village to village in search of patients. His treatment consists in the application of strong escharotics that not only destroy the pile tumors, but often produce extensive sloughing in all the surrounding parts.

### THE PLAGUE.

I spent several days, while in Bombay, among the plague-stricken victims of that city. Through the courtesy of Major Wilkins, who has charge of all the plague hospitals here, I had every opportunity to see and study this disease. I first visited the stations where the natives were receiving the preventive inoculation. In this line I was most interested in the work being done by Lieutenant Wylie and his wife, who are spending $500 a month of their own private funds in this work. To induce the natives to be inoculated, they give three day's rations of food and ten cents in money to every one who will submit to the ordeal. They inoculate about 100 every day. These patients report every morning. There is usually a marked constitutional reaction as a result of the treatment. The authorities have great difficulty in getting the natives to submit to this preventive treatment, and so far only 90,000 have been inoculated in the whole province in which Bombay is situated.

The toxin that is used as a prophylactic against the plague is prepared by taking the virus from the liver of a patient who has just died of the disease. Of this a culture is made in agar-agar, for from four to six weeks, or until the germs of the disease have attained their maximum of vitality. This first culture is now put into bouillon and allowed to undergo a second process of germination and growth. This second culture is next submitted to a high temperature so as to insure the death of all the germs that it contains. This last is the fluid used as a preventive injection. Dr. Wylie tells me that the great difficulty is to get antitoxin of a uniform and proper strength. I find a wide difference of opinion among the men with whom I have conversed as to the utility of this preventive inoculation. In fact, at the present time, the whole subject seems to be in an experimental stage. The best evidence of its efficacy is furnished in one of the prisons here, where among 100 uninoculated prisoners 40 died of the disease, while among 100 of those who had been inoculated, only eight died. To overcome the prejudices of the natives against the inoculation for the prevention of the plague, the Viceroy of India, Lord Curzon, before he started on his late tour through the country, had himself and all his staff inoculated.

When, in 1896, the plague first began to be a serious menace to Bombay, the British authorities attempted to carry out most stringent measures for its suppression. A house-to-house search was made, and every person who had plague symptoms was taken to a hospital for treatment. These regulations were carried out only a short time, when it was found that the opposition to them was so great that their continued enforcement would lead to a revolution. So at the present time, only persuasive measures are used to induce patients to go to the hospital for treatment. To accomplish this, it is generally necessary to allow the whole family to accompany the friend who is removed from his home, and temporary straw huts are erected in the hospital grounds for the accommodation of the entire family. Not only this, but all the friends must be allowed free access, at all times, to the bedside of the plague-stricken patient. A half dozen plague victims in the agonies of death, with all their friends hovering over their bodies, all within the confines of a single hospital ward, would produce a scene, if enacted in the western world, that would rend the heart of the most hardened onlooker. The air would be full of the suppressed sobs of the men, and the wild shrieks of the women and children. In Bombay, however, the whole thing is a silent and noiseless pantomine. Not a tear trickles down the dark cheek of the Hindu as he sits, a silent spectator of one of the most heart-rending scenes that it falls to the lot of man to witness. In both race and religion he is the opposite of the one who inhabits the other side of the globe. He is a fatalist and believes that whatever happens must occur and can not be averted, and therefore looks on it as a religious duty

Dr. Robert Fells Library
U. M. R. Medical Col.

to submit, without a murmur, to whatever fate the Creator may send to him.

In my observation in the plague hospitals at Bombay, I saw many cases that illustrate the great difficulties with which an early diagnosis of this disease is beset. In fact, patients are often received into general hospitals and treated for other diseases, especially for lung troubles, who really have bubonic plague. Several cases of this kind were received during the last year in the Jamsetjee Jeejeebhoy Hospital, through a mistaken diagnosis, and in this way two nurses and one young physician lost their lives.

Attached to every plague hospital is a detention ward where patients are kept during a stage of the disease in which a diagnosis can not be made with absolute certainty. In a hospital where there were 200 plague patients there were 50 who were inmates of the detention ward adjoining. I saw a good many patients examined by experts. The symptoms sought for as diagnostic signs of plague were an initial chill, glandular swellings about the neck, armpits, or groin, redness of the conjunctiva, partial aphasia, ataxic symptoms on attempting to walk, and shooting pains running down the back part of the legs. The temperature after the initial chill generally runs up to from 104 to 106 F., and after remaining at this point for 36 to 72 hours, falls again to normal or below.

The sickest patients die in this first stage of the disease. In those who survive, after the lapse of another twenty-four or forty-eight hours the temperature again rises. From this time on the fever runs the usual course of a severe case of septic infection. The seat of the glandular involvement seems to have much to do with sealing the fate of the patient. If the glands about the neck are invaded, the case is a hopeless one. Next in its fatal results is the infection of the axillary glands, and the most hopeful cases are those where the buboes form in the groins. If the patient survives with the last form of glandular suppuration, the destruction of tissue is sometimes terrible. I have seen open cavities extending above and below Poupart's ligament, as large as a cocoanut, where all the iliac blood-vessels and nerves were exposed.

I spent a forenoon at Arthur Road Plague Hospital, with Dr. N. H. Chosky, a native physician who has had charge of the plague work in this institution since 1896, and who has probably treated more cases of this disease than any man living. As illustrating the status of serumtherapy in this disease, and showing that at the present time the remedy is only on trial, the Doctor uses it on every alternate one as the patients come into his service, and treats the others on lines that he has heretofore adopted.

Ice applications are applied to the glandular swellings for the first forty-eight hours, and after that he resorts to warm poultices. Outside of the serum treatment, the management of the cases is purely symptomatic. Strychnin, camphor, digitalis and the like are resorted to to keep up the circulation. In all severe cases, the stomach will retain nothing, and medicines have to be given hypodermically and food by the rectum.

Though Dr. Chosky is not at all sanguine in his views in regard to the efficacy of the serum treatment of the plague, he is still hopeful and says that in his last 200 cases, one-half of whom he treated without the serum, and the other half with, of the former he saved 15 per cent., and of the latter 40 per cent. Major Wilkins tells me that for months together they have lost 95 per cent. of all the plague patients they have treated in Bombay.

I visited a small hospital set apart for the treatment of European cases of the plague. I found it nearly empty. It received twenty-five patients during the last four months, of whom one-half have died. The Parsees have a separate hospital for the care of their plague patients, and the mortality among them is slightly less than among the Hindoos, though the nervous sequelæ that follow the disease are much more frequent among them, owing to their being of a more neurotic temperament than are the Hindoos.

The curative serum used is prepared in a large laboratory in Bombay, of which Dr. Bannerman has charge, and to whom I had a letter of introduction, but I was so pressed for time that I was not able to visit this institution.

W. S. Caldwell, M.D.

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### The "Assistance Publique" of Paris.

Paris, France, April 25, 1900.

*To the Editor:*—In the novel, "Les Morticoles," Daudet caricatured the Assistance Publique as an organization which, owing to the degenerated state of French society, finally became so powerful that there were only two classes, one composed of the Assistance Publique, with its vast machinery of lawyers, doctors, internes, externes, druggists, nurses, and attendants who were engaged in taking care of the other class, which was composed of the rest of society, comprising the ill and the imaginary ill, the insane, idiots, senile, juvenile, vicious and poor. While it is amusing from its absurd exaggeration of the modern tendency to mental and physical degeneracy, it is no exaggeration of the rapidly growing idea among the people—fostered by the prodigal amount of gratuitous work on the part of the medical profession—who think that society owes them a living and medical treatment. There was recently a case of two sisters, one of whom received aid from the Assistance Publique on account of poverty and tuberculosis, and the other gave up her work and tried to draw a pension also; when refused she hired a lawyer and brought suit for her rights.

Because the municipal council has recently granted an appropriation of about seventy-five million francs for remodeling such old landmarks, infected but historic, as Pitié, Charité, Bichât, and Laennec, the Assistance Publique is assumed to be immensely rich. But this is not at all true. The annual sum expended amounts to about thirty-five million francs, while the total revenue from rents, tax on balls, operas, spectacles, Paris-mutual (horse races), as well as private donations, does not amount to more than fifteen million francs, which leaves an annual deficit of twenty million francs to be made up from the municipal budget. The Assistance Publique was founded in 1849 and comprises in its management nearly all the hospitals and asylums, as well as the distribution of succor to the indigent, both within and without its institutions. Its work extends to more than half a million people annually; about 200,000 in hospitals and retreats, 11,000 orphans, 3000 insane, 113,000 indigent and necessitous, 110,000 aided at domicile, 22,000 accouchements, 30,000 children cared for in provinces, 4000 morally abandoned children, and about 10,000 children whose parents are assisted in supporting them.

The director-general, Dr. Napias, who receives a salary of 15,000 francs, is assisted by a council of surveillance composed of thirty-five members—one-fifth of whom are medical men—who are appointed by the President of the Republic for a term of six years without salary. The headquarters of the administration is at 3 Avenue Victoria, near the Hotel de Ville, where any one interested in visiting any or all of the institutions can obtain a card of admission from Dr. Napias.

Naturally, with such an extensive service, there is an immense staff to preside over the different bureaus; for in the present state of French "Mandarism," to become consulting physician one has to pass through the successive *concours* of *stagiare* externe, interne, assistant, *agrégé medicin des hôpitaux,* etc. The fierce struggle to pass the *concours d'Internat.* was shown recently in the scandal of l'Hôpital Beaujon—where some unknown rejected candidate poured sulphuric acid into the box of examination papers, thus nullifying the examination, as previously noted in The Journal. The failure to discover the culprit may be explained by the intense *esprit de corps* existing among the students, that makes them all suffer rather than betray one of their number. This *esprit de corps* binds together both students and professors in such a solidarity of the profession that the absurd and meddlesome interference of laical directors in hospital affairs, as exists in many American hospitals, would be an utter impossibility in France.

Since so much is consumed by this institution, a great saving is secured by having under its own management a slaughterhouse, and part of the central market, wine cellars and bakery. The latter, in the old "Scipio palace" in the Rue Scipio, buys wheat in large quantities and puts it through all the milling processes, turning it almost directly into the steam dough-mixers of the bakery, whose ovens, running day and night, turn out 16,000 kilos of bread a day, not including over a thousand loaves of glutin bread for the diabetics. A central pharmacy puts up all the stock drugs as well as supplies the French hospitals in Africa and the Orient. A central magazine, near the Salpetrière, makes bedding, surgical dressings and clothing for the patients, utilizing for this purpose the services of many of the inmates of the Salpetrière. A central amphitheater of anatomy furnishes material for the students who can not be supplied at the University.

### ECOLE LAILLER.

To go into a minute description of all the branches of this great "hospital syndicate" would take too much space. I wish to call attention to one department, on account of its novelty—the Ecole Lailler—for the treatment of contagious scalp diseases of children at l'Hôpital St. Louis. Prior to 1890 the children suffering with scalp diseases were put into the general wards with adults, until Quinquad set apart a portion of the Salle Bazin for the treatment of the *teigneux*—ringworm cases. This was an old building where there was an ecole externe for many cases for whom there was no room, but who came daily for treatment and instruction. When Besnier took charge of the service he had a young interne, R. Sabouraud, who took up the bacteriologic investigation of the *teigne tondante* or ringworm of the scalp, and demonstrated that it was due to two distinct forms of parasitic plant life the *microsporon Audouini* or *petit spore* and the *tricophyton* or *gross spore*. The former produced a large circular or oval bald plaque, in which projecting stubs of hairs were coated with a sheath of minute spores resembling fine sand sprinkled on a glue-coated thread; and the latter produced numerous small plaques in which the hairs, broken at the surface of the skin, showed as small black points or else were twisted under adherent scales that revealed under the microscope chains of large cells within the hair shaft. One was an ectothrix, the other an endothrix. In his investigations, which formed the basis of his "These de Paris" (1894), he generously gave all honor of his prediscovery to his eminent predecessor in the same field, Gruby, whose work fifty years previously (1840) had failed to be recognized by the medical profession. The honor is none the less due to Sabouraud, whose work was entirely original and remains classic. In 1892, there broke out in the hospital at Bery-sur-mer—a sanitarium for children with true tuberculosis—an epidemic of *teigne tondante*, and Besnier was appealed to for aid in suppressing it.

He sent his interne, Sabouraud, who examined and found out of 500, 350 heads affected, the boys mostly having the *petit spore*, and the girls, *gros spore*. After nearly a year's work, with a corps of epilators and careful isolation, the disease was at last entirely exterminated.

Imbued with an enthusiasm, all the greater for the general indifference or ignorance on the part of the public and the profession in the care of these cases, Sabouraud set to work to found a special hospital and laboratory for the study and treatment of parasitic scalp diseases. The Assistance Publique, aided by private subscription, founded in 1895 the Ecole Lailler in the northwestern end of the grounds of St. Louis Hospital.

While the *teignes* are very rare in Germany, they are very frequent in France and England, there being about three thousand cases in Paris alone. When treated they may be cured in several months; untreated they last an average of four years. Favus, which is much rarer in cities and more common in the country, may last ten to twenty years when untreated. In other words about 5 per cent. of the infant school population is affected and refused admission to the city schools, 1 per cent. may find a place in special services. and 1 per cent. may receive externe treatment, leaving 3 per cent. to become street vagabonds, with its deplorable consequences.

The Ecole Lailler is a three-story brick and stone structure, occupying three sides of a hollow square, which forms an ample playground for the 350 children who are so fortunate as to be admitted. Large dining-rooms, well aired, hygienically perfect sleeping-rooms and school-rooms, abundant nourishing food, make their lives blissful as compared with their former homes. The whole drawback is the weekly séance with the *epilator*, of whom there are sixteen, and the bi-weekly application of croton-oil, with the subsequent expressing of suppurating follicles with antiseptic applications of iodin and iodid of potash solution. As all cases suspected of having contagious scalp diseases are sent to Sabouraud for a certificate before being admitted to the schools, his Monday consultations for the *teignes* and Thursday for the *pelades* are crowded, and there is a long waiting-list for admission to the school.

When the case is considered as probably cured, the child is discharged with the injunction to return in a month for observation, then if there are no signs of return, a "provisory certificate" is given, and at the end of another month, a second certificate or "certificate definitive."

A branch of the Ecole Lailler, called "Ecole B," in another part of the grounds, is devoted exclusively to favus and *pelade*, or alopecia areata, so that the children affected with these mildly contagious scalp affections can not contract the extremely contagious *teigner*.

There are here about sixty cases of *pelade* which are treated by means of the electric-light rays, as furnished in the apparatus of Finsen, of Copenhagen. An arc-light of twenty thousand candle power sends its actinic and violet rays through a system of lenses in four telescope tubes upon the heads of the four individuals who can take treatment simultaneously. A stratum of circulatory water in the telescope tube absorbs the heat rays, while at the point of focus, another water chamber lessens the unpleasant sensation of heat. The treatment is given three times a week, in one-half to three-quarter of an hour séances and the results obtained often after two or three weeks of treatment have been very gratifying. The favus cases, about fifteen in number, are treated by monthly epilation, with iodin, iodid, and glycerin applications, and average four to five months of treatment.

The clinical advantages of the school are made available to the profession in the bi-weekly consultations in a course of lectures on scalp diseases, by Dr. Sabouraud, gratuitous, in which the cultures and life history of the scalp micro-organisms are given, as well as a demonstration of the cases. The privilege of working in his perfectly equipped laboratory for histologic and bacteriologic work is extended most cordially to a certain number of native and foreign physicians.

A. D. MEWBORN, M. D.

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### Opium in Infancy and Adult Life.

WESTFIELD, N. J., May 22, 1900.

*To the Editor:*—I have read, with the greatest interest, the paper in THE JOURNAL of May 19, entitled: "Use of Opium in Infancy, seen in Adult Life," by Dr. T. D. Crothers. It is, in many respects, one of the most striking contributions to current literature that has been recently published, and although a year has passed since the occasion of the Doctor's reading it, it touches the chord of perennial importance.

I have not had all the experience that Dr. Crothers has had, for I am not a specialist in his line, but in the course of practice among children in both New York and Brooklyn, from 1888 to the present year, I have been privileged to corroborate and confirm all that he has said, and very much more. The use of opium in infancy and childhood is an evil of the greatest magnitude, and especially among the working classes. I have no statistics to publish, but I can say that the custom prevails to an alarming extent. Not only is there the recognition of the convenience and practical value of the remedies for children's disorders, but quite as often where a child is in perfect health, the use of the opiate to "keep it quiet" is a stand-by. If the prescription-files and sales-books of the druggists were to be scanned, it would be evident that the evil is spelled with a large "E," and it is a formidable one, because when one tries to "reason" with those who dose the children, it is invariably useless. They may apparently have all confidence in you, and hear your reproofs with good grace, but no sooner do you leave the house than that mother or sister finds the bottle on her cupboard shelf, or on the shelf at the drug store, and gives a dose to the child. She may not intend to be a hypocrite, or to array herself in opposition to you; possibly not, but she knows, and you know, that the seductive opiate relieves, and it is relief that is her object and aim.

As to "after-effects" and "reaction," I have the most positive opinions. The effects of the repeated sedations are grievous. As Dr. Crothers says: "The cell functions and growths are slowed up, retarded, and finally changed." I have noticed it, over and over again, and I can show to-day, boys and girls—especially girls—whose instability of health is traceable to those miserable drugs.

Recognizing this perversion of cell growths and functions, and despairing of having my arguments accommodated with a hearing, I felt it incumbent on me to antagonize these effects, and it is my custom to seize every opportunity to show that the "drops" have done mischief. This is no difficult task, as these children are always complaining of ails and ills. I prescribe two drops of eucalyptol in milk three times a day, and it is good to be able to say that it promotes normal cell nutrition and antagonizes the disaffection of functions. It is my experience that this works admirably, not alone in affording temporary relief, but, moreover, in ensuring permanent results. This is a matter of prophylaxis altogether valuable and interesting, and one to be heartily commended. I am also using the eucalyptol for these youths out of my own clientele, and for others, who, I make no doubt, owe ill health or lessened vigor to the same cause. The results are uniformly excellent.

It is not a pleasant matter to contemplate, but I submit that this "opiumism" of infancy is largely responsible for the mental perverts, the inebriety, and the lack of mental, physical, and moral stamina, so largely in evidence.

Sincerely yours, Giffard Knox, M.D.

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### The New York Pathological Institute.

Hartford, Conn, May 21, 1900.

*To the Editor:*—The ways of politicians in New York are always mysterious and startling. The unknown is always happening, particularly to institutions that are not well founded in public opinion. In the early sixties an inebriate asylum was founded at Binghamton. Later, the state took charge of it, and after a varied career under "boss rule" it was finally turned into an insane asylum. A little farther on in the history the reformatory at Elmira was founded and conducted on most advanced lines. Then the same old battle concentrated about it and tremendous efforts were made to destroy it, and change it to some other work. Fortunately, this failed. The epileptic asylum has been the center of the controversy, and were it not for very wise management a political battle would have begun to change and break it up before this.

Now comes similar storm and effort to break up the pathologic institute. For reasons unknown and inconceivable, the superintendents of the state hospitals and the politicians are in great doubt as to the value of the work there. They urge abolishment of the work or changing it in some unknown way to the interest of the tax-payers, etc. This institute, inaugurated for the purpose of utilizing and studying the mass of material gathered, is practically a laboratory for the higher study of psychopathy, and is the first one organized in this country. Already its reports give promise of researches of the most practical character on the causes and condition of insanity. The five volumes of papers bearing on these higher questions are the foundations of an entirely new field of psychiatry, and in the work done there is more practical advance and more suggestive study than in the asylum literature of half a century. This institute is designed to make exhaustive studies, both microscopically and statistically, of all the phases of insanity and the various conditions which result in brain defects. This is done by trained experts who have nothing but the facts to ascertain, and have no other duties than those of scientific study. The asylum pathologists are supposed to send specimens of morbid anatomy, histories of disputed cases, and psychologic facts to this institute for final study. Matters which are not clear to the busy physicians on the staffs of these crowded hospitals are sent to this institute for study at leisure. There is in this an almost infinite field of most practical scientific work of the greatest value to every citizen of the state as well as to those of other states.

There is something startling in the adverse feeling of the superintendents of the various asylums to this work, and it is incomprehensible why they should not be its warmest admirers and seek in every way to continue a work which makes their own more and more accurate and scientific. It has been a matter of surprise to visitors at the older insane asylums of the country to find such an enormous accumulation of clinical histories of patients piled away in rooms as so much lumber. The staff has no time and perhaps little ability to study or analyze these records and make practical use of them. An institute could utilize these facts and show their practical meaning as no asylum could. There must be some central head with *time and skill to study facts of this character*. New York State has taken the lead with the warmest endorsement of every scientific man, and the present effort to break up the institute or narrow and change its work would be a calamity to science. We can not believe that the friends of psychopathy will permit such a change. The very absence of central scientific laboratory work has much to do with the confusion and ignorance of many phases of practical medicine. The whole trend of modern medicine is to centralize and specialize the study of all its various phases so that it can become more and more a science. The threatened destruction of the New York Pathological Institute is one of the perils which we hope may be avoided by wiser counsel and broader views.

T. D. Crothers, M.D.

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# Deaths and Obituaries.

Edward Oram Shakespeare, M.D., Philadelphia, died suddenly, June 1, from chronic cardiac trouble. He was born of distinguished lineage in New Castle County, Delaware, May 19, 1846. He was graduated from Dickinson College in 1867, and from the Medical Department of the University of Pennsylvania two years later. He began the practice of his profession at Dover, Del., but in 1874 removed to Philadelphia, where later he was appointed lecturer on operative ophthalmic surgery in the University of Pennsylvania. He was, in 1885, sent as the representative of the Federal Government to Spain and other European countries in which cholera was prevalent, to investigate the cause, prevention, and cure of that disease. He spent several months abroad in the study of the subject, and made a report to Congress. During the war with Spain he was appointed a brigade surgeon, with the rank of major of volunteers, and at the time of his death he was acting as a member of the commission attached to the office of the Surgeon-General at Washington to investigate the causes of typhoid fever in the United States Army. He was a member of many scientific societies, including the Delaware Medical Society, the Northern Medical Society, the Pathological Society of Philadelphia, and the Philadelphia County Medical Society. He contributed to *The American Journal of Medical Sciences* for January, 1870, a paper on "A New Ophthalmoscope and Ophthalmometer, Devised for Clinical Use and for Physiological and Therapeutical Investigation on Men and Animals," which he had invented.

James T. Whittaker, M.D., professor of theory and practice in the Ohio Medical College, died June 5, at his home in Cincinnati, of recurrent intestinal carcinoma. He graduated from Oxford University in 1863, and served for a time in the Union Army as a private. After this service he resumed the study of medicine, but again left college to accept an assistant surgeonship in the Navy, serving on the *Cumberland*. At the close of the war he entered the medical department of the University of Pennsylvania, where he graduated in 1866. He made two trips to Europe, enjoying the advantage of personal instruction from Dr. Robert Koch. He has served on the medical staff of the Cincinnati Hospital and at the time of his death occupied a similar position at the Good Samaritan.

W. H. I. O'Malley, M.D., assistant surgeon of the Cal. Twelfth Inf., died in San Francisco, May 24, aged 38 years. He was graduated from the University of California in the department of liberal arts and medicine. In 1898, he became a contract surgeon and was sent to Honolulu, where he remained until he was transferred to the Philippines. He was injured in December and again in February, and returned to San Francisco on the transport *Sherman*, April 25.

L. J. Jones, M.D., Wichita, Kan., died in Galena, Kan., May 20. He was born in Kentucky in 1830. He was a graduate of the Transylvania University and of Louisville Medical College. During the Civil War he was for over three years surgeon on the Union side, being connected with the Sixteenth Kentucky Infantry, and in charge of the officers' hospital of the Twenty-third army corps.

GARDNER C. PIERCE, M.D., Ashland, Mass., died May 18, in a hospital, where he had undergone an operation. He was graduated from Harvard University Medical School in 1866, and for over thirty years had practiced in Ashland. He was a member of the Massachusetts Medical Society, and a former president of the South Middlesex Medical Association.

WILLIAM H. CHAMBERLAIN, M.D., died May 21, at his home in Oneida, N. Y. He studied at the University of Michigan two years, then entered the New York Medical College, from which institution he was graduated in 1876. He practiced twenty-one years in Oneida, and three in Utica.

HORACE B. SCOTT, M.D., Jefferson, a surgeon in the U. S. N., died at the home of his father in Wallingford, Conn., May 29, aged 43 years. He was a graduate of Trinity College, Conn., class of 1878, and served in the navy until his health failed.

SAMUEL H. KEEDY, M.D., a native of Washington County, Md., and ex-United States Consul to Rheims and Grenoble, France, died at St. Agnes' Hospital, Baltimore, May 14, of heart disease. During the Civil War he was an assistant surgeon in the Federal Army.

H. C. CHAFFEE, M.D., Tolono, Ill., died May 21, aged 84 years. He was graduated from the Albany Medical College in 1854. After two years of study in Paris, he located in Tolono, where he has since lived.

JOSEPH H. LITTLE, M.D., Washington, Pa., died May 16, aged 65 years. He was graduated from Washington College in 1855, and from the medical department of the University of Pennsylvania in 1859.

SAMUEL C. MAXWELL, M.D., Duluth, Minn., died May 13. He was born in Crawfordsville, Ind., in 1840, and was graduated from Rush Medical College in 1866.

### RESOLUTIONS ON DEATH OF DR. WOODRUFF.

At a meeting of the Columbus Academy of Medicine, held May 26, the following resolutions were passed, (An obituary of Dr. Woodruff appeared in last week's JOURNAL):

WHEREAS, Dr. Elmer W. Woodruff, in the early prime of life and rising usefulness, has, by the providence of God, been removed from our number;

*Resolved*, That we recognize in Dr. Woodruff an honorable and conscientious co-worker, devoted to the highest interests of his profession, as a practitioner and as a teacher (in Starling Medical College).

*Resolved*, That in his death, the Academy has sustained the loss of an active and useful member, whose high professional honor and exemplary life are worthy of remembrance.

*Resolved*, That these resolutions be made a part of the records of the Academy, published in the columns of the *Columbus Medical Journal*, and the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, and that a copy be transmitted to his family with the profound sympathy of the members of the Academy.

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| *Committee* | ANDREW TIMBERMAN, |
| J. U. BARNHILL. | President. |
| J. F. BALDWIN. | A. M. STEINFELD, |
| W. D. DEUSCHLE. | Secretary. |

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**French Medical Sickness Insurance Society.**—A society was organized among the physicians of the department of the Seine fourteen years ago, for the purpose of securing a fund to pay an indemnity of $2 a day to members in case of sickness. The reserve fund is now $60,000, and the immense services the society has rendered are an eloquent plea for further organization among members of the profession. It has been predicted that the twentieth is to be a century of association, and an editorial in the *Presse Méd.* of April 25 remarks that the medical profession has more to gain from organization than has any other, that it would "thus transform the weakness of each into the strength of all, as an association has the paradoxical virtue of being stronger than the sum total of its component parts."

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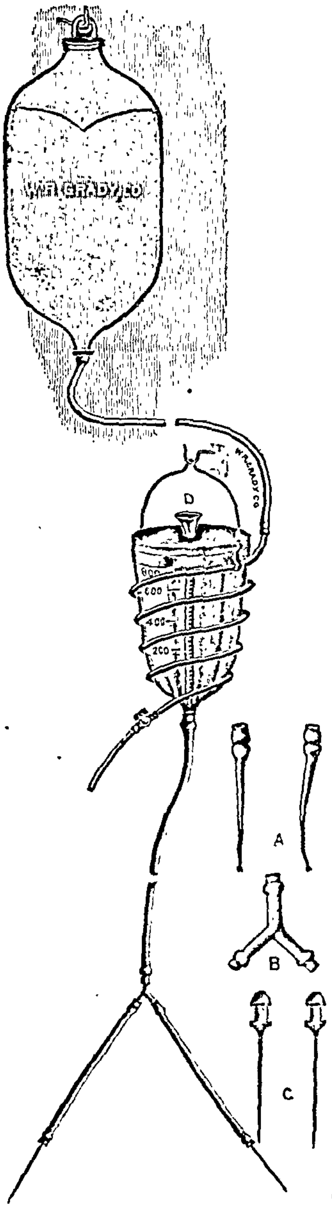
# New Instrument.

## Normal Salt Transfusion Apparatus.

BY CARL HERMAN ANDERSEN, M.D.

CHICAGO.

In common with other workers, I have felt the need of a transfusion apparatus that would accurately sustain an even temperature and maintain a regulated flow, and for this purpose have devised one, which I here present.



A. Glass tubes for intravenous transfusion. It will be noted that they have bulbous ends to avoid injuring the vein when introduced. B. Joint. C. Needles for subcutaneous transfusion. D. Perforation in the lid for sterilized cotton. E. Thermometer. F. Cotton diaphragm. G. Three-quart enema bag. H. Waste pipe.

It consists of a glass jar capable of holding 1000 c.c., as is indicated on its side. A thermometer is suspended in its center. It has a lid with a perforated center, into which sterile cotton is placed to filter the air; a cotton diaphragm inside the jar filters the salt solution. A rubber tube attached to its lower end carries off the solution, and there is a metal coil of tubing entwining the jar, through which is circulated hot water coming from a rubber bag suspended above it, or from an ordinary hot-water faucet. At the lower end of the coil is a stop-cock, to which is attached a rubber tube to carry off the hot water which circulates in the coil.

If this apparatus is used in a hospital, it can very readily be attached to the hot-water faucet, or to the hot-water boiler, and the water flowing through the glass will keep the saline solution at an even temperature. If it is used in private practice, all that is necessary is to fill the rubber bag, which holds three quarts of water, and allow it to flow through as fast as it can be carried off through the waste pipe. The opening in the latter is made so that it will take about thirty minutes to carry off the three quarts of water, and as that is as long as it takes to administer an intravenous or subcutaneous transfusion, it answers all purposes of a stationary boiler.

When we consider that intravenous or subcutaneous infusion of normal salt solution is performed only in cases where there has been considerable hemorrhage, or where the patient is in a critical condition, it can readily be seen that if a solution is used which is below the normal blood heat, it must do harm, as, instead of decreasing the shock, it will increase it. It must also be remembered that in ordinary transfusion apparatus, that is, the kind in general use, the solution will lose from 10 to 14 degrees in heat, and as it flows through the rubber tube it loses from .5 to .75 degree for every foot. From this, it can readily be seen that the last half of the transfusion is done with water much below the normal blood heat.

# Miscellany.

**Committee of Revision of the United States Pharmacopeia.**—The eighth decennial convention for revising the United States Pharmacopeia elected the following committee for revision, the medical or pharmaceutical bodies represented being in parentheses: Charles Rice (chemist, public drug department), New York City, chairman; Joseph J. Remington (Phila. Coll. of Pharm.), Philadelphia, vice-chairman; Reynold W. Wilcox (Med. Soc. State of N. Y.), New York City; Edward H. Squibb (N. Y. Academy of Med.), Brooklyn, N. Y.; Virgil F. Coblentz (N. Y. Coll. of Pharm.), New York City; Willis G. Gregory (Buffalo Coll. of Pharm.), Buffalo, N. Y.; Wilbur L. Scoville (Mass. Coll. of Pharm.), Boston; Hobart A. Hare (AM. MED. ASSN.), Philadelphia; John Marshall (Univ. of Pa., Med. Dept.), Philadelphia; Samuel P. Sadtler (Phila. Coll. of Pharm.), Philadelphia; Henry Kraemer (Phila. Coll of Pharm.), Philadelphia; John J. Abel (Johns Hopkins Univ., Med. Dept.), Baltimore, Md.; Charles Caspari (Md. Coll. of Pharm.), Baltimore, Md.; Alfred R. L. Dohme (Am. Pharm. Assn.), Baltimore, Md.; George F. Payne (Atlanta Coll. of Pharm. and Sur.), Atlanta, Ga.; Albert B. Lyons (Mich. Pharm. Assn.), Detroit, Mich.; Alonzo B. Stevens (Mich. Univ., Pharm. School), Ann Arbor, Mich.; Nathan S. Davis, Jr., (N. W. Univ., Med. School), Chicago; Walter S. Haines (Rush Medical College), Chicago; Oscar Oldberg (N. W. Univ., Pharm. School), Chicago; Carl S. N. Hallberg (Chicago Coll. of Pharm., Univ. of Ills.), Chicago; John M. Good (St. Louis Coll. of Pharm.), St. Louis, Mo.; C. Lewis Diehl (Louisville Coll. of Pharm.), Louisville, Ky.; Lucius E. Sayre (Kan. Univ., Pharm. School), Lawrence, Kan.; Edward Kremers (Wis. Univ., Pharm. School), Madison, Wis.; Horatio C. Wood (Univ. of Pa.), president of the Pharmacopeial convention—*ex-officio.*

*Scope of the Pharmacopeia.*—The Committee of Revision is authorized to admit into the pharmacopeia any products of Nature of known origin; also any synthetized product of definite composition which is in common use by the medical profession, the identity, purity, or strength of which can be determined. No compound or mixture shall be introduced if the composition or mode of manufacture thereof be kept secret, or if it be controlled by unlimited proprietary or patent rights.

*Doses.*—After each pharmacopeial article—drug, chemical, or preparation—which is used or likely to be used internally or hypodermically, the Committee is instructed to state the average approximate—but neither a minimum nor a maximum—dose for adults, and, where deemed advisable, also for children. It is to be distinctly understood that neither this convention nor the Committee of Revision created by it intends to have these doses regarded as obligatory on the physician or as forbidding him to exceed them whenever in his judgment this seems advisable. The committee is directed to make a distinct declaration to this effect in some prominent place in the new pharmacopeia, the metric system to be used and the equivalents to be given, parenthetically in customary weights and measures, in approximate equivalents.

*Nomenclature.*—It is recommended that changes in the titles of articles at present official be made only for the purpose of insuring greater accuracy, or safety in dispensing. In the case of newly-admitted articles, it is recomended that such titles be chosen as are in harmony with general usage and convenient for prescribing; but in the case of chemicals of a definite composition a scientific name should be given at least as a synonym.

*Assay Processes.*—The Committee is instructed to append assay processes to as many of the potent drugs and preparations made therefrom as may be found possible, provided that the processes of assay are reasonably simple—both as to methods and apparatus required—and lead to uniform results in different hands. As regards the products of such assays, tests of identity and purity should be added wherever feasible. Physiologic tests for determining strength should not be introduced by the Committee.

*Purity and Strength of Pharmacopeial Articles.*—The Committee is instructed to revise, as carefully as possible, the limits of purity and strength of the pharmacopeial chemicals and preparations for which limiting tests are given. While no concession should be made toward a diminution of medicinal value, allowance should be made for unavoidable, innocuous impurities or variations due to the particular source or mode of preparation, or to the keeping qualities of the several articles. In the case of natural products, the limits of admissible impurities should be placed high enough to exclude any that would not be accepted by other countries. Regarding the strength of diluted acids, tinctures, and galenical preparations in general, it is recommended that the Committee keep in view the desirability of at least a gradual approach upon mutual concessions toward uniformity with similar preparations of other pharmacopeias, particularly in the case of potent remedies which are in general use among civilized nations.

*General Formulas.*—It is recommended that general formulas be introduced, as far as the particular nature of the several drugs will permit, for fluid extracts, tinctures, and such other preparations as are made by identical processes, and that the general formula to be followed in each case be merely indicated by reference.

*Weights and Measures.*—The Committee is instructed to retain the metric system of weights and measures adopted in the seventh decennial revision.

*Precedents.*—In all matters not specially provided for in these "General Principles," the rules established for previous revisions if there are any, should be followed.

*Supplements.*—The Committee of Revision is authorized to prepare a supplement whenever such action may be deemed desirable or practicable.

**An Army Hospital in the Philippines.**—Major S. C. Mills, inspector-general, U. S. A., made an inspection of the Santa Mesa Hospital, March 13, the report of which has just been received by the U. S. War Department. It is interesting, as giving a full description of the hospital and its management from the point of view of one who is a soldier but not a medical officer. The hospital is situated three miles east by north of the Palace, City of Manila, on the Calle Santa Mesa. A blue print, without description, shows the arrangement of the buildings, which were erected originally as barracks, but were turned over to the medical department on Nov. 4, 1899. The first patient was received November 10, following. The wards, six long pavilions, are arranged, three facing the other three, on a street or enclosure 200 feet wide. This street is prolonged at one end by three sets of nurses' quarters on one side, and on the other three buildings—an office and two quarters for hospital men. Officers' quarters close in one of the ends, and storage buildings and stables the other. The length of the enclosure thus formed is about 500 yards; about midway of its length is the dispensary building, and near the stable is the guard-house. All these buildings are of native construction, the frames being bamboo and the sides and roof, nipa; while the partition walls do not reach the roof. The floors are of split bamboo and well raised from the ground. There are covered verandas along the front and ends of each building, and the result is well-ventilated apartments which are probably as cool as can be constructed in that climate. Each ward building is nearly 300 feet long, and is divided into two sections by a room in the center for the wardmaster's daily supplies and dispensaries. A mess-room and kitchen are connected with each ward building by covered ways in the rear, and beyond these each has a separate building for its sinks, with a bath-house, containing four showers. This arrangement of the buildings makes each ward complete in itself, with its mess-room, kitchen, closets and bath-room attached. The capacity of the hospital is 650 beds; at present five wards are occupied, three medical, one surgical and medical, and one venereal, the last being used as a lock ward for venereal cases from the other military hospitals in the City of Manila.

Since the hospital was opened, Nov. 10, 1899, the number of cases treated has been: regulars, 840; volunteers, 1372; total, 2212; the number of deaths, 24, of which 6 were from dysentery, 5 from diarrhea, 3 each from typhoid and malarial fevers, 2 from injury, 1 from gastric disorder and 4 from other causes. The number present at the time of inspection was 289, of which 111 were venereal, 60 malarial fever, 30 dysentery, 11 diarrhea, 15 dengue, and 7 surgical cases. No case of typhoid fever was present.

The clothing of patients is taken from them on entry and stored under lock in a clothing room, while pajamas, hats, shoes and stockings are issued for use. Pajamas are thus, so to speak, the uniform of the hospital patients, and this has the advantage of making a patient always recognizable, and he can not, unknown, cross the line of sentinels. The bunks are of iron with woven-wire mattresses; and in each ward there are on duty during the day two wardmasters, two female nurses, and six hospital corps men; during the night, four attendants. Hospital corps men work in twelve-hour shifts, and female nurses in eight. The patients are fed from the regulation allowance of forty cents a patient a day. The low price of beef permits this sum to be just sufficient. Full, light, and special diets are prepared in the kitchen of each ward, and in each is a chief cook, who is a hospital corps man, two Chinese cooks and four Chinese mess-room attendants. The kitchens were found to be neat, clean and well supplied; and the food well-prepared and served. Supplies from the subsistence department are good and furnished promptly; bread is purchased in the city and is of excellent quality; ice is furnished by the medical department; water is from the city mains, but is filtered before use for drinking purposes. The food for the sick is inspected by the ward surgeons, the nurses and the medical officer of the day. The inspector cites bills of fare for each ward from March 5 to 11, inclusive. The March 5 bill is submitted as an illustration.

*Breakfast.*

| FULL DIET. | SPECIAL DIET. |
|---|---|
| Dry corn beef hash. | Poached eggs on toast. |
| Corn bread with molasses. | Boiled rice with milk and sugar. |
| Boiled rice with milk and sugar. | Coffee. |
| Bread, butter, coffee. | |
| *Dinner.* | |
| Beef soup. | Beef soup. |
| Roast beef. | Bread pudding. |
| Brown gravy, mashed potatoes. | Canned apples. |
| Bread pudding with sauce. | Bread and tea. |
| Stewed apples, bread, tea. | |
| *Supper.* | |
| Hamburger steak. | Mock turtle soup. |
| Boiled potatoes. | Dry toast. |
| Canned peas, stewed. | Soda crackers. |
| Stewed prunes. | Stewed apples. |
| Bread and tea. | Bread and tea. |

The dispensary is in excellent condition. There is a good operating-room, with the necessary instruments and appliances, and also a chemical and bacteriologic laboratory. The surgeon in charge makes a stated inspection of the entire hospital once a week; the officer of the day inspects twice daily, in the morning and after taps; ward surgeons make regular rounds twice a day and such other visits to particular patients as are required. The books are correctly and neatly kept. There is a hospital fund properly accounted for; balance verified at inspection, $100.10. There is a system of calls similar to that of military posts. Proper precautions are taken to guard against fire. Laundry work for the hospital is done in the city on contract at 2 cents, gold, per piece.

The general condition of the hospital is extremely good. The hospital is clean, comfortable, well-equipped and well run. An excellent system of record of the admission, diagnosis, treatment, transfer or other disposition of each patient, has been devised; and the history of each case is complete. Major E. B. Moseley, surgeon, U. S. A., has been in charge of this hospital since its organization, and the condition of the hospital now is a great tribute to his professional and executive skill and ability.

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## BOOKS AND PAMPHLETS RECEIVED.

Acknowledgement of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

BOOKS.

A TREATISE ON NASAL SUPPURATION; or Suppurative Diseases of the Nose and the Accessory Sinuses. By Dr. Ludwig Grunwald. Translated from the Second German Edition, by William Lamb, M.D., M.C., M.R.C.P. With eight illustrations in the Text, two Plates, and one Table. Cloth, Pp. 335. Price $3. New York: Wm. Wood & Co. 1900.

INTERNATIONAL CLINICS. A Quarterly of Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, and other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession Throughout the World. Edited by Henry W. Cattell, A.M., M.D., Philadelphia; with the Collaboration of John Ashhurst, Jr., M.D., LL.D.; and Charles H. Reed, M.D., Philadelphia; James T. Whittaker, M.D., LL.D., Cincinnati, with regular correspondents in Montreal, London, Paris, Leipsic, and Vienna. Volume I. Tenth Series, 1900. Cloth. Pp. 315. Price $2.75. Philadelphia: J. B. Lippincott Co. 1900.

ANNUAL OF ECLECTIC MEDICINE AND SURGERY. Edited by John V. Stevens, M.D. Vol. VIII, Embracing the Papers and Proceedings of the Various State Eclectic Medical Societies for the years 1897 and 1898. 8vo., Pp. 538. Cloth. Price $2. Cincinnati, Ohio: The Scudder Brothers Co. 1900.

TWENTY-FIFTH ANNUAL REPORT OF THE SECRETARY OF THE STATE BOARD OF HEALTH OF THE STATE OF MICHIGAN for the fiscal year ending June 30, 1897. Cloth. Pp. 600. Lansing, Mich.: Robert Smith Printing Co. 1899.

PROCEEDINGS AND ADDRESSES AT A SANITARY CONVENTION HELD AT TRAVERSE CITY, MICHIGAN, AUG. 22 AND 23, 1899. Under the direction of a Committee of the State Board of Health and a Committee of Citizens of Traverse City. (Supplement to the Report of the Michigan State Board of Health for the Year 1900.) Paper. Pp. 105. Lansing, Mich.; Robert Smith Printing Co. 1900.

REPORT OF THE TRUSTEES OF THE NEWBERRY LIBRARY. For the year 1899. Paper. Pp. 64. Chicago: Hollister Bros. 1900.

CITY OF FALL RIVER, MASS. REPORT OF THE BOARD OF HEALTH for the year ending Dec. 3, 1899. Paper. Pp. 70. Fall River, Mass.: J. H. Franklin & Co. 1900.

THE OPHTHALMIC PATIENT. A Manual of Therapeutics and Nursing in Eye Diseases. By Percy Fridenberg, M.D., Ophthalmic Surgeon to the Randall's Island and Infants' Hospitals. Cloth. Pp. 310. Price, $1.50. New York: The MacMillan Co. 1900.

A TEXT-BOOK OF PRACTICAL THERAPEUTICS: With Especial Reference to the Application of Remedial Measures to Disease and Their Employment Upon a Rational Basis. By Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. With Special Chapters by Drs. G. E. deSchweinitz, Edward Martin and Barton C. Hirst. New (8th) Edition. In One Octavo Volume of 796 pages, with 37 Engravings and 3 Colored Plates. Cloth, $4; Leather, $5, net. Philadelphia and New York: Lea Brothers & Co.

TEXT-BOOK OF MEDICAL TREATMENT OF DISEASES AND SYMPTOMS, for Use of Students and Practitioners of Medicine. By Nestor Tirard, M.D., F.R.C.P., Professor of Principles of Medicine, King's College, London. Adapted to the U. S. Pharmacopeia by E. Quin Thornton, M.D., of Jefferson Medical College, Philadelphia. Octavo. Pp. 624. Just Ready. Cloth, $4 net. Philadelphia and New York: Lea Brothers & Co.

CLINICAL EXAMINATION OF URINE WITH AN ATLAS OF URINARY DEPOSITS. Including Forty-one Original Plates, Mostly Colored. By Lindley Scott, M.A., M.D. Cloth. Price, $5. Philadelphia: P. Blakiston's Son & Co. 1900.

PRACTICAL TREATISE ON THE SEXUAL DISORDERS OF THE MALE AND FEMALE. New (2d) Edition. By Robert W. Taylor M.D., Clinical Professor of Venereal Diseases in the College of Physicians and Surgeons, New York. Octavo. Pp. 435, with 91 Illustrations and 13 Plates in Colors and Monochrome. Cloth, $3 net. Philadelphia and New York: Lea Brothers & Co.

TRANSACTIONS OF THE NEW YORK STATE MEDICAL ASSOCIATION for the Year 1899. Volume XVI. Edited for the Association by M. C. O'Brien M.D., of New York County. Cloth. Pp. 887. New York: Published by the Association.

DISEASES OF THE INTESTINES. A Text-Book for Practitioners and Students of Medicine. By Max Einhorn, M.D., Professor of Medicine at the New York Post-Graduate Medical School and Hospital. Cloth. Pp. 390. Price, $3. New York: Wm. Wood & Co. 1900.

PAMPHLETS.

TREATMENT OF VENEREAL ULCERS. N. E. Aronstam, M.D., Ph.G. Reprinted from Medical Age.

SIX CASES OF CHRONIC HEART DISEASE SUCCESSFULLY TREATED BY THE SCHOTT METHOD. Victor Neesen, M.D. Reprinted from N. Y. Med. Jour.

NON-MALIGNANT GASTRIC AND DUODENAL ULCERS: WITH ILLUSTRATIVE CASES. Thomas Satterthwaite, M.D., New York. Reprinted from Med. Record.

TRADE PAMPHLETS.

MONOGRAPHS FROM RESEARCH LABORATORY OF SHARP AND DOHME. No. 1. The History, Pharmacognosy and Chemistry of Cascara Sagrada. By Alfred R. L. Dohme, Ph.D., and Herman Engelhardt, Ph.D. Baltimore, Md.

A CATALOGUE OF INSTRUMENTS USED IN THE PRACTICE OF LARYNGOLOGY, RHINOLOGY, AND OTOLOGY. Manufactured by Mayer & Meltzer, London, England.

ST JOSEPH SANITARIUM AND BATH HOUSE, AND THE CURATIVE WATERS OF MT. CLEMENS, MICH.

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# The Public Service.

## NAVY CHANGES.

Changes in the Medical Corps of the Navy for the week ending May 19, 1900.

Medical Director T. C. Walton, detached from duty at the naval laboratory, Brooklyn, N. Y., and from other duty May 20, and ordered home to wait orders and retirement May 31, at 62 years of age.

P. A. Surgeon W. C. Braisted, orders to the *Mayflower* revoked. When the *Detroit* is placed out of commission detached and ordered home and directed to hold himself in readiness for orders to sea.

P. A. Surgeon G. D. Costigan, detached from the Boston Navy Yard, May 29, and ordered to temporary duty on the *Pensacola* and then to the Asiatic Station via the *Gaelic*.

Assistant Surgeon E. Davis, detached from the naval hospital, Brooklyn, N. Y., May 29, and ordered to temporary duty on the *Pensacola* and then to the Asiatic Station via the *Gaelic*.

Assistant Surgeon J. T. Kennedy, detached from the *Independence*, June 4, and ordered to the Asiatic Station via the *Gaelic*.

Assistant Surgeon T. M. Lippett, detached from the *Oregon*, and ordered to the *Newark*.

Pharmacist S. W. Douglas, detached from the *Wabash* and or dered to the Key West naval station for such duty as may be assigned as relief of Pharmacist I. N. Hurd.

Pharmacist I. N. Hurd, upon reporting of relief, detached from the Key West naval station and ordered to the *Wabash.*

## MARINE-HOSPITAL CHANGES.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the seven days ending May 24, 1900.

Surgeon R. M. Woodward, to proceed to Porto Rico on special temporary duty.

P. A. Surgeon J. M. Eager, relieved from duty at Cincinnati, Ohio, and directed to proceed to Norfolk, Virginia, and assume command of the service.

Assistant Surgeon John McMullen, Bureau order of April 2, 1900, directing Assistant Surgeon McMullen to assume command of the Tortugas Quarantine, temporarily revoked, and directed to report to medical officer in command of that station for duty.

Assistant Surgeon John W. Kerr, Bureau order of May 7, 1900, directing Assistant Surgeon Kerr to proceed to Hongkong, China, for duty, suspended, and directed to report to medical officer in command, San Francisco Quarantine (Cal.) for temporary duty.

Assistant Surgeon J. W. Schereschewsky, relieved from duty at Havana, Cuba, and directed to proceed to New Orleans, La., and report to medical officer in command for duty and assignment to quarters.

Assistant Surgeon J. W. Amesse, Bureau order of May 7, 1900, directing Assistant Surgeon Amesse to proceed to Honolulu, Hawaii, for temporary duty, suspended, and directed to report to medical officer in command, San Francisco Quarantine (Cal.) for temporary duty.

Assistant Surgeon R. L. Wilson, to report to medical officer in command San Francisco Quarantine (Cal.) for duty.

Assistant Surgeon T. D. Berry, upon being relieved from duty at New Orleans, La., to proceed to Havana, Cuba, and report to Surgeon H. R. Carter for duty.

Assistant Surgeon R. H. Earle, relieved from duty at Detroit, Michigan, and directed to proceed to the San Francisco Quarantine (Cal.) and report to the medical officer in command for duty.

Assistant Surgeon B. J. Lloyd, relieved from duty at Chicago, Illinois, and directed to proceed to the San Francisco Quarantine (Cal.) and report to the medical officer in command for duty.

Acting Assistant Surgeon B. W. Goldsborough, granted leave of absence for two days.

Acting Assistant Surgeon J. W. Stevens, to assume temporary charge of the service at Cincinnati, Ohio, vice P. A. Surgeon J. M. Eager, relieved.

Acting Assistant Surgeon W. O. Wetmore, relieved from duty at the Immigration Depot, New York, N. Y., and directed to report to the medical officer in command, Cape Charles Quarantine (Va.) for duty and assignment to quarters.

Hospital Steward A. M. Roabrig, to report to medical officer in command, San Francisco Quarantine (Cal.) for special temporary duty.

Hospital Steward S. W. Richardson, to report at Washington, D. C., for special temporary duty.

## HEALTH REPORTS.

The following cases of smallpox, yellow fever, cholera and plague, have [illegible] Surgeon General, U. S. Marine-Hospital Serv[illegible] led June 2, 1900.

District of [illegible] May 12-19, 5 cases, 1 death;

Colorado: [illegible] 2 cases; Arapahoe Co., May 19, 2 cases; Boul[illegible]; Otero Co., May 19, 3 cases; Pueblo Co., May 19, 2 cases; San Miguel Co., May 19, 1 case.

Illinois: Cairo, May 12-26, 4 cases.

Indiana: Evansville, May 19-26, 1 case; Indianapolis, May 12-19, 7 cases.

Kansas: Wichita, May 19-26, 7 cases.

Kentucky: Covington, May 19-26, 8 cases.

Louisiana: New Orleans, May 12-26, 78 cases, 22 deaths; Shreveport, May 19-26, 3 cases.

Massachusetts: Fall River, May 19-26, 1 case; Lowell, May 19-26, 2 cases.

Michigan: Detroit, May 12-19, 3 cases; Grand Rapids, May 12-19, 5 cases, 1 death.

Minnesota: Minneapolis, April 28 to May 5, 54 cases, 3 deaths.

New Mexico: Capitan, May 7-21, 11 cases.

New York: New York, May 19-26, 4 cases.

Ohio: Cleveland, May 19-26, 32 cases.

Oregon: Portland, May 17, 1 case.

South Carolina: Greenville, May 12-19, 2 cases.

Utah: Salt Lake City, May 12-26, 6 cases.

Virginia: Petersburg, April 26 to May 26, 2 cases.

Washington: Tacoma, May 12-19, 1 case.

Wisconsin: Door Co., May 22, 8 cases; Douglas Co., May 22, 8 cases; Eau Claire Co., May 22, 10 cases; Kewaunee Co., May 22, 6 cases; Pierce Co., May 22, 1 case; St. Croix Co., May 22, 70 cases, 1 death; Waupaca Co., May 22, 3 cases, 1 death.

Wyoming: Cheyenne, May 19, 3 cases; Rock Creek, May 19, 2 cases; Sweetwater Co., May 19, 18 cases; Green River, May 19, 18 cases; Evanston, May 19, 6 cases; Aspen, May 19, 1 case; Tunnel, May 19, 13 cases.

### SMALLPOX—FOREIGN.

Austria: Prague, April 28 to May 12, 9 cases.

Belgium: Antwerp, May 5-12, 6 cases.

Brazil: Rio de Janeiro, March 31 to April 13, 14 cases, 11 deaths.

Canada: Ontario—Collingwood, May 16, 1 case; Sault Ste Marie, May 16, prevalent; Manitoba—Winnipeg, May 12-26, 16 cases, 3 deaths.

China: Hongkong, April 7-21, 1 case, 1 death.

Egypt: Cairo: April 1 to May 6, 55 deaths.

England: Liverpool, May 5-12, 8 cases, 1 death; London, April 28 to May 12, 11 cases, 1 death; Southamptom, May 12-19, 1 case.

France: Lyons, April 21 to May 12, 8 deaths.

Germany: May 5-12, 2 cases.

Gibraltar: April 28 to May 13, 4 cases.

Greece: Athens, May 5-12, 3 cases, 4 deaths.

India: Bombay, April 17 to May 1, 101 deaths; Calcutta, March 24 to April 7, 102 deaths; Kurrachee, April 15-29, 45 cases, 19 deaths; Madras, April 7-27, 2 deaths.

Italy: Leghorn, May 5-12, 1 case, 1 death.

Mexico: Chihuahua, May 12-19, 1 death; Vera Cruz, May 12-19, 4 cases, 4 deaths.

Russia: Odessa, April 28 to May 12, 15 cases, 4 deaths; St. Petersburg, April 28 to May 5, 15 cases, 3 deaths; Warsaw, April 22 to May 5, 6 deaths.

Scotland: Glasgow, May 11-18, 27 cases, 1 death.

Spain: Corunna, May 5-12, 1 death; Madrid, April 21 to May 5, 16 deaths; Valencia, May 12-19, 1 case.

Straits Settlements: Singapore, April 1-21, 11 deaths.

### YELLOW FEVER.

Brazil: Rio de Janeiro, March 31 to April 13, 47 cases, 34 deaths.

Colombia: Panama, May 15-22, 7 cases, 4 deaths.

Cuba: Cienfuegos, May 26, 5 cases, 3 deaths, at Santa Clara barracks.

### CHOLERA.

India: Bombay, April 17 to May 1, 37 deaths; Calcutta, March 24 to April 7, 217 deaths; Madras, April 7-13, 1 death.

Japan: Osaka and Hiogo, April 21-28, 1 case.

### PLAGUE.

China: Hongkong, April 7-21, 40 cases, 35 deaths.

India: Bombay, April 17 to May 1, 894 deaths; Calcutta, March 24-31, 1599 deaths; Kurrachee, April 16-29, 763 cases, 622 deaths.

Japan: Osaka, April 8 to May 14, 11 cases, 3 deaths; Shidzouka, May 7, 1 case.

## CHANGE OF ADDRESS.

Dr. B. Agin, from 2236 to 2336 Bellefontaine St., Kansas City, Mo.

Dr. L. Andrews, from 356 Marshfield Ave. to 356 S. Hermitage Ave., Chicago, Ill.

Dr. D. W. Byers, from Woburn to 12 Rutland Square, Boston, Mass.

Dr. F. E. Bellinger, from Omaha, Neb., to Laurens, Iowa.

Dr. W. M. L. Coplin, from 1419 S. Broad St., Philadelphia, to Grassland, W. Va.

Dr. R. F. Currie, from Galveston to Lott, Texas,

Dr. H. S. Chandler, from Woodward, O. T., to Glen Allen, Mo.

Dr. M. C. Cornelius, from 4725 to 4710 Calumet Ave., Chicago.

Dr. J. L. Campbell, from 34½ Peachtree St. to Prudential Bldg., Atlanta, Ga.

Dr. J. C. Da Costa, from 1633 Arch St. to 247 S. 13th St., Philadelphia, Pa.

Dr. J. C. Flippin, from Univ. of Va., Charlottesville, to 1015 N. Main St., Danville, Va.

Dr. K. W. Field, from 1312 Canal St., New Orleans, La., to 245 Willburn St., Dallas, Texas.

Dr. H. S. Foringer, from Chicago, Ill., to Kaylor, Pa.

Dr. P. H. Fisher, from Detroit to Coloma, Mich.

Dr. G. W. Finley, from 150 to 1416 N. Meridian St., Brazil, Ind.

Dr. M. J. Friedel, from 1228 Milwaukee Ave. to 566 N. Ashland Ave., Chicago, Ill.

Dr. A. D. Fraser, from 6860 to 6901 Halsted St., Chicago, Ill.

Dr. H. Forline, from Bradbury Blk. to Douglas Blk., Los Angeles, Cal.

Dr. C. J. Gibson, from care Maltine Co. to 227 N. Central Ave., Austin, Chicago.

Dr. W. A. Gillespie, from 1708 to 1204 Canal St., New Orleans, La.

Dr. H. F. Goodwin, from 531 W. Adams St. to 511 Ashland Boul., Chicago, Ill.

Dr. E. S. Goodhue, from 1514 N. 20th St., Los Angeles, to Piru City, Cal.

Dr. H. C. Homer, from 2301 Indiana Ave. to 2515 Wabash Ave., Chicago, Ill.

Dr. R. S. Jackson, Galveston to Double Bayou, Texas.

Dr. T. T. Jacobson, from The Laurel, Cleveland to Ravenna, Ohio.

Dr. S. Jakubowski, from 535 Garfield Ave. to Cook County Hospital, Chicago, Ill.

Dr. W. A. Jaquith, from 3841 Rhodes Ave. to 5713 Drexel Ave., Chicago, Ill.

Dr. J. J. Johnson, from St. Louis, Mo., to Russell, Kansas.

Dr. J. R. W. Kerr, from Mt. Pleasant, Miss., to Sachse, Texas.

Dr. W. P. Kingsbury, from 203 E. 19th St. to 335 2nd Ave., New York, N. Y.

Dr. O. E. Linjer, from St. James to 830 22nd Ave. S., Minneapolis, Minn.

Dr. J. J. Lloyd, from 28 E. Lawn St., Charlottesville, to 704 Pearl St., Lynchburg, Va.

Dr. B. Levenberg, from 154 Orange St. to 288 Woodland Ave., Cleveland, Ohio.

Dr. J. S. Lennon, from Washington D. C., to The Shelburne, Atlantic City, N. J.

Dr. R. R. Loomis, from Keosauqua, Ia., to Brock, Mo.

Dr. F. Lydston, from Hotel Luzerne to 570 Fullerton Ave., Chicago, Ill.

Dr. E. A. Lawbaugh, from 239 La Salle St. to 2754 N. Hermitage Ave., Chicago, Ill.

Dr. John Morris, from 118 E. Franklin St., Baltimore, Md., to Sykesville, Md.

Dr. S. S. Norsman, from Madison, Wis., to Cape Nome, Alaska.

Dr. D. A. Payne, from Gainesville, Texas, to 866 Monroe St., Chicago.

Dr. L. C. Pratt, from Columbus to Bellefontaine, Ohio.

Dr. W. A. Robison, from Amsterdam to Filley, Mo.

Dr. W. J. McRoberts, from 417 S. Garrison St., St. Louis, to Jefferson City, Mo.

Dr. J. A. Simpson, from Burnside, Ky., to Oneida, Tenn.

Dr. L. C. Snell, from 1615 N. 7th St., Kansas City, to Noel, Mo.

Dr. J. Starkweather, from St. Louis, Mo., to Harris, Kans.

Dr. J. E. Streker, from Chattanooga, Tenn., to Logansport, Ind.

Dr. J. T. McShane, from 26 E. Ohio to 229 N. Penn St., Indianapolis, Ind.

Dr. E. A. Sickels, from 117½ to 91½ Galena Ave., Dixon, Ill.

Dr. P. A. Sullivan, from 281 Jackson Boul., to 293 Monroe St., Chicago.

Dr. L. W. Shannon, from 298 Maxwell St., to Alexian Brothers Hospital, Chicago.

Dr. J. P. Sheppard, from Columbia, Tenn., to Krause Building, Little Rock, Ark.

Dr. O. V. Session, from Box 43, Los Angeles, to Hueneme, Cal.

Dr. F. V. Watson, from Roberts to Baldwin, Wis.

Dr. J. W. White, from St. James to Senath, Mo.

Dr. C. C. Williams, from 716 Westlake, Los Angeles, Cal., to Hartford, Conn.

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# Oration.

## GASTRIC HEMORRHAGE.

ORATION IN SURGERY, DELIVERED AT THE FIFTY-FIRST ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT ATLANTIC CITY, N. J., JUNE 5-8, 1900.

BY WILLIAM L. RODMAN, M.D.
Professor of the Principles of Surgery and Clinical Surgery, Medico-Chirurgical College.
PHILADELPHIA.

Permit me in the first place to express my profoundest gratitude to the ASSOCIATION for the distinguished honor conferred in placing the surgical oration for 1900 in my hands. It is with more than diffidence that I approach so great a responsibility, being keenly alive to my own shortcomings, and having for the nonce a quickened memory of the brilliant addresses made on former occasions by many of my illustrious predecessors.

Instead of reviewing the advances made in the entire field of surgery during the past year—a task which could, at best, be only cursorily done in the time that I feel warranted in occupying, I have chosen to consider the subject of hemorrhage from the stomach in its several phases, as being more likely to interest a mixed audience, such as we have, comprising specialists, general practitioners and surgeons. Furthermore, the lack of attention given the subject justifies the selection.

Gastric hemorrhage of whatever nature was, until recently, looked upon as strictly a medical affection, and was treated on the same general principles as underlie the treatment of many other internal hemorrhages. This is still true of many, indeed most, cases of gastrorrhagia, but as I shall endeavor to show, is not the case with others which are treated by a combination of medical and surgical means, and others still which should be met by prompt operative procedure.

Our purpose will be best subserved by enumerating the different varieties of gastrorrhagias, showing how they are to be diagnosticated, and giving the treatment to be pursued in the more important varieties. Hemorrhage from the stomach may result from ulcer of the stomach, duodenal ulcer, gastric carcinoma, cirrhosis of the liver, vicarious menstruation, post-operative hematemesis, purpura hemorrhagica, miliary aneurysms, aneurysms of the aorta and other vessels, leukemia, typhoid, yellow and other infectious fevers, valvular disease of the heart, and various kinds of traumatism.

It will be practicable to consider only the most important and frequent causes of gastric hemorrhage.

Gastric ulcer is the most common disease of the stomach producing hemorrhage—occurring in 5 per cent. of the entire population, according to Ewald[1] and others high in authority.

Hematemesis occurs in at least 50 per cent. of all cases of gastric ulcer, and many authorities estimate it as present in 80 per cent. It is, too, fatal in 8 per cent. of the cases in which it occurs, according to the conservative estimate of Leube,[2] and we can not question that it is indirectly fatal in a much greater number of cases by anemia and its remote consequences.

Many authorities who might be quoted place both the frequency and mortality of hemorrhage higher than Leube does, and very few as low. Therefore, its prompt detection and proper treatment are of the greatest importance. The recognition of gastric hemorrhage resulting from ulcer is usually readily made on account of the previous diagnosis in the case; but if the patient is seen at or subsequent to the hemorrhage for the first time, its association with the other classic symptoms of ulcer, particularly pain and vomiting after eating, leave little room for doubt. While there will be pain, vomiting, and gastrorrhagia in carcinoma of the stomach, the differences furnished by the two diseases are so marked that doubtful or border-line cases will be rare.

Pain, which is common to both, is more influenced by the taking of food in ulcer, and the local tenderness on pressure is decidedly more circumscribed, so much so that the patient will point at it with the tip of his finger, rather than with the entire hand. This is a valuable sign, and is insisted upon by J. M. DaCosta.[3] It is usually felt with the greatest intensity from one to two inches below the xiphoid cartilage; and directly opposite, near the heads of the last two ribs, will be found a second painful spot. The pain of ulcer is often relieved at once by emesis if it empties the stomach. This is not the case with the pain and vomiting of carcinoma.

The character and amount of the ejected blood, however, will usually give prompt and positive evidence of its source, and the cause underlying it, making it needless to question and physically examine a patient who should be kept quiet during, and for some time after, a hemorrhage. Bleeding in carcinoma is rarely so free as in ulcer; the amount of blood lost being more frequent, in small quantities, and of the characteristic coffee-grounds aappearance. It does not resemble pure blood, as it does in ulcer, even though mixed with food. The presence of hydrochloric acid—perhaps an excess of it, or hyperchlorhydria—in the ejected matter is as characteristic of ulcer as its presence and the presence of lactic acid are of carcinoma. Ulcer is more frequent in females under 40, whereas carcinoma occurs more commonly in men past middle life.

If an examination of the patient is allowable, the presence of a palpable tumor will be more often encountered in carcinoma th [illegible] ni [illegible] er, but I wo [illegible] phasize the fact t [illegible] may, and [illegible] in quite a numbe [illegible] cers th [illegible] cised. On acc [illegible] the op thought that they were operating for malignant disease, until the microscope showed differently, and in every instance the subsequent clinical history has confirmed the verdict of the microscopist. Our distinguished president, Dr. W. W. Keen, was one of the first to do partial gastrectomy for a benign ulcer which caused quite a marked tumor through the abdominal wall. The patient recovered promptly and is still—ten years after the operation—in perfect health. Others have had the same experience, as will be seen by reference to my paper read before the American Surgical Association, May 1, reporting all operated cases up to date.

*Treatment.*—Formerly the treatment of hemorrhage from gastric ulcer was uniformly by ice, astringents, and opium, combined, of course, with rest. This should properly be the treatment still for the first hemorrhage in all cases; for the second possibly; but not for subsequent ones, for recurring hemorrhage, like appendicitis, *will sooner or later prove fatal, and should, like that affection*, be treated radically; and to carry the parallelism further, the best time to operate is between attacks. With two hemorrhages coming close together we may assume that, as in appendicitis, there will be a third attack, and if anything is to be attempted surgically it should be done when the patient is in fairly good condition, and *not in the collapse of hemorrhage.*

Before taking up operative procedures it might be well to refer to the treatment of gastrorrhagia by copious enemata of hot water, as advised and practiced with such happy effect seemingly by Tripier.[5]

In several cases which had resisted all the usual medicinal and dietetic treatment, Tripier secured prompt and abiding results by hot enemata repeated twice or thrice daily. The water should be injected at a temperature of 112 to 120 F. There is no doubt, he says, that the hemorrhage came from the stomach, duodenum and points high in the alimentary tract. Hot water acts reflexly.

Tripier has also found that hot enemata promptly check intestinal hemorrhage in typhoid fever, as it will bleeding from the rectum, sigmoid, and large bowel. We use hot water to check external, uterine, and other hemorrhages, and so superior is it to ice that one rarely sees the latter used. It certainly should be preferred in rectal and other intestinal hemorrhages where the water can come promptly in contact with the bleeding points. We also know that with the patient in proper position, points higher up in the alimentary canal may thus be reached, and the bleeding capillaries or arterioles influenced directly by the best of hemostatics—heat. There is also evidence to show that it acts reflexly, and may in this way control duodenal, even gastric, hemorrhage.

Plunging the hands in hot water will at times quickly arrest bleeding at the nose, as will ice applied to the head. This, surely, must be reflex. Another and good reason for using hot water per rectum in the manner advised by Tripier is, that if nothing more is done shock is combated in the best possible way, as it is easy to add salt to the water in proper proportion to make normal salt solution. Hot water should also be taken in small quantities by the stomach. It is my belief that it will be less likely to excite vomiting and more certain in its hemostatic effects than ice. Favorably as I look on the proposal to use hot water in the ways indicated in both gastric and intestinal hemorrhage, anatomy and pathology must not be forgotten, and it should be clearly understood that hot water can do no more in internal hemorrhages than is to be expected in external ones. If the bleeding is capillary or the open arterioles of very small size, prompt hemostasis may result; whereas, if an artery or vein of any size has been opened we may expect much less from any treatment which depends for its success on *the formation of a firm clot in the* mouth of the bleeding vessel, than we usually can in external hemorrhage. In the latter we usually have complete section of a blood-vessel, which favors retraction and contraction of its coats—Nature's best means of arresting hemorrhage, favoring as they do the formation of a clot.

In hemorrhage the result of disease, however, we have very generally a *lateral opening made into the caliber of* the blood-vessel, and the ability of the latter to contract and retract within its sheath is no greater, but actually less, than that of a vessel incompletely cut across. Occasionally, it is true, ulcerative action will as completely divide a blood-vessel as if it were done by a knife, but such cases are exceptional, as will be shown by a careful study of fifty-five fatal cases of gastric and duodenal hemorrhage collected and reported by M. Savariaud[6] in his very complete thesis.

Of fifty-five autopsies collected from various sources, and reported by Savariaud—none were operated upon—there were: Ulcerations of the splenic artery, 17 cases; ulcerations of the coronary artery, 6; ulcerations of the pancreatico-duodenal, 7; ulcerations of the gastric arterioles, 10; branches of the coronary vein, 2; other veins, 2; vessel not determined, 2; no vascular orifice visible, 4; vessel not mentioned, 4.

Hematemesis frequently occurs as the result of duodenal ulcerations, and as it is at times impossible to differentiate between gastric and duodenal hemorrhage, we have included the seven cases of duodenal ulcer. Furthermore, gastric and duodenal ulcerations frequently coexist and the treatment of both is essentially the same.

The splenic artery and vein have been opened by the same ulcer, as occurred in the case of Gaillard.[7]

Contrary to what might with reason be expected, there is no constant relation between the size of the vessel and the amount of blood, or the rapidity with which it is lost. It is impossible, therefore, to diagnosticate with any degree of certainty the source of the hemorrhage, and an opinion at best is only a guess based on probabilities anatomic and pathologic. He who said, "the end of all philosophy is a learned doubt," *must have been a medical man thinking of gastric hemorrhage.*

The subjoined table is also from Savariaud.

| Vessel. | Cases. | Sudden Death. | Rapid Death. | Survived Considerable Time. |
|---|---|---|---|---|
| Heart | 4 | 1 | 1 | 2 (3 days) |
| Aorta | 2 | 1 | 1 | 1 (10 days) |
| Hepatic | 2 | 1 | 1 | 1 (10 days) |
| Splenic | 17 | 3 | 7 | 7 (2 to 8 days) |
| Coronary | 6 | 1 | 3 | 2 |
| Pancreatico-duodenal | 6 | 1 | 3 | 2 (8 to 15 days) |
| Arterioles | 10 | 1 | 1 | 8 (4 to 15 days) |
| Small Veins | 4 | 1 | 1 | 2 (7 to 11 days) |
| Invisible Veins | 3 | 2 | 1 | 1 (21 days) |

It will also be seen from this table, based on autopsies where *careful examinations were made, that death may* be sudden in capillary hemorrhage, or delayed ten days when there is an opening into the aorta as large as a haricot bean—Grunfeld's case.

This uncertainty of diagnosis is a strong argument in favor of surgical intervention before it is too late.

I would emphasize the fact shown by the above table, which is based on accurate post-mortem examinations, that large and rapidly fatal hemorrhages may occur from capillaries. These observations have also been borne out in many of the operative cases herewith reported, for in at least seven, while the bleeding was free, it could not be located. So then, having in mind the usual source of hemorrhage in gastric ulcer, and that it is from vessels of rather large size in nearly four-fifths of all fatal cases, the uncertainty and utter unreliability of the ordinary medical means employed will be apparent.

Measures adapted to the treatment of capillary hemorrhage may often succeed, and of these we believe hot water to promise the most, but as one would not think of treating hemorrhage from the radial artery or vein by such means, one should think less of doing so here with vessels of equal and even greater size involved, with Nature's best means of checking hemorrhage made impossible for the reasons already given.

It is therefore manifest that hemorrhages following the superficial erosions of the gastric mucous membrane—the *exulceratio simplex* of Dieulafoy—rather than the gastrorrhagias following the *ulcus simplex* of Cruveilhier, which is essentially a perforating process, stand the best chance to be arrested spontaneously by Nature, or to be cured by the routine medicinal and dietetic treatment.

The hemorrhage may undoubtedly be just as free in the superficial as the deep ulcers, but the difference is in the size of the bleeding vessels. As there are only capillaries and arterioles in the gastric mucous membrane, hemorrhages from such vessels could be reasonably expected to yield to measures impotent in the presence of bleeding from a coronary or splenic artery. Representing as they do less than 20 per cent. of the fatal hemorrhages, there is every reason to believe that bleeding from capillaries and arterioles will constitute a very much larger per cent., possibly a majority, of non-fatal gastrorrhagias. I have collected, so far as I know,, every published case of operation for bleeding ulcer, and to them added many reported to me in personal communications for the first time. A careful study of my tables does not enable me to say definitely the number of cases in which the bleeding came from arterioles. It does, however, justify the statement that it is a large per cent.

Having exhausted all of the ordinary medical means for arresting hemorrhage, should such cases be treated as external hemorrhage, viz., the bleeding vessels cut down and ligated? There are now a sufficient number of cases on record to justify the statement that better results will be secured by judicious interference than by a policy of inaction hitherto invariably followed. By this I would not be understood as advocating the opposite plan of interference in every case—far from it. Up to a certain point there is substantial agreement between physicians and surgeons, and I may say here that the idea of arresting hemorrhage from gastric ulcer by surgical means occurred to a physician and a surgeon at the same time. In all cases of small but frequent hemorrhages, which slowly but almost surely destroy the patient, recourse should be had to timely operation. If there is at the same time gastrectasis, the indication for operation is absolute, as dilatation stretches the ulcer, prevents healing and favors bleeding.

The results, too, of operations for chronic hemorrhage have been more than encouraging and should, without question, lead to earlier and more frequent surgical intervention. There have been thirty-one operations for frequently recurring, or what might be called chronic, hemorrhage, with six deaths, or a mortality of 19.3 per cent. This is, under the circumstances, an excellent showing when it is remembered that it represents but little more than the average mortality given in a large number of operations on the stomach for non-hemorrhagic ulcers. Mr. Robson[8] reports 188 operations for gastric ulcer—non-hemorrhagic and non-perforating—with a mortality of 16.4 per cent., which is about the same conclusion reached by Heydenriech,[9] Tricome[10] and others who have written on the subject. He (Robson) later on gives the mortality of operations for chronic hemorrhage as 10.5 per cent. Manifestly gastroenterostomy, pyloroplasty, or other operations on the stomach should not give a better prognosis on account of the presence of hemorrhage as a symptom. The good showing now made for recurring hemorrhage will be still better when physicians generally recognize that if delayed operations are justifiable, early ones are better, and should, therefore, be encouraged at a time when the chances of success are correspondingly brighter.

Operations for acute hemorrhage in general do not so imperatively call for surgical intervention, but when this is said, it is saying nothing more than is true of external hemorrhage. In the present state of our knowledge, we can not say that operation should ever be done during the first hemorrhage or the ensuing shock. Likewise, if seen after the hemorrhage, when the patient is successfully rallying from shock, a policy of non-intervention is not only permissible, but best.

Dieulafoy[11] advises surgical intervention after the first hemorrhage, if as much as half a liter of blood is lost, and insists on operation if the bleeding is repeated within twenty-four hours. One of Dieulafoy's patients was succesfully operated on by Cazin, after the first hemorrhage. There has been, however, a rather general condemnation of too early operation by surgeons, from Mikulicz, the first to operate for hemorrhage, in 1887, and from Keen, Hartman, Heydenriech and Robson, none of whom have advised operations in acute hemorrhage. Certainly surgeons can not be accused of too great alacrity in operating for gastric hemorrhage when none have been so radical as a physician.

If the hemorrhage is repeated within a short time, the burning question will present itself to the physician first, to the surgeon next: shall a policy of "masterly inactivity" be longer pursued? To this question a majority would still answer "yes," believing that the chances offered by Nature are better than those given by surgery. I am satisfied that during a second serious hemorrhage inaction should govern, or only medical means be used; but as soon as bleeding ceases, the patient has rallied from shock and is in good condition, something should be done to prevent what are reasonably certain—other hemorrhages. This is even less radical than what we should do in external hemorrhage, and, as has been said, Nature has less chance to arrest spontaneously bleeding from vessels opened by ulcerative action.

I am thoroughly convinced, from a careful study of all reported operative cases up to date, that none were operated on too early, but many too late. It is certainly the duty of the physician to summon surgical aid as soon as the second hemorrhage begins, if he has not already done so, that everything may be in readiness to seize upon a propitious time for interference before a third attack.

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## TABLES EMBRACING ALL CASES FOUND IN LITERATURE OF OPERATIONS FOR ACUTE AND CHRONIC HEMORRHAGES COMPLICATING GASTRIC ULCER. COMPILED WITH THE ASSISTANCE OF DRS. STILLWELL C. BURNS AND W. H. THOMAS.

| No. | Operator. | Sex. Age. | History. | Symptoms. | Diagnosis. | Date oper. | Conditions found at operation. | Operation. | Remarks. | Result. | Reference. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Abbe . . . (A) | F... | One month previous to admission had vomited thirty ounces of blood. . . . . . . . . . . . . | Epigastric pain, vomiting, slight abdominal rigidity. | Chronic gastric ulcer. | . . | No ulcers discovered at time of operation. | Gastrotomy. . . . . . . . . . . | Temperature continued to rise, a few hours before death had recurr'nc' of hematemesis: ulcers on ant. and post. walls. | Death. | N. Y. Med. Journal, May, 1891 |
| 2 | Andrews, E. Wyllys (A) | F... 33 | For two years has had constant boring pain, located beneath zyphoid cartilage, greatly increased by food. | May 28. 1898. the patient collapsed from sudden profuse gastric hemorrhage. This was repeated the following day. | Gastric ulcer. | 5, 30, 1898 | Ulcer 12 mm. in diameter found on posterior wall and deeply eroded. | Ulcer drawn forward so as to form the apex of a cone around the base of which a strong ligature was tied. | Patient has remained well up to the present time. | Recovery. | Annals of Surgery, 1898, p. 393. |
| 3 | Andrews, E. Wyllys (A) | M.. 36 | Had suffered for several years from cardialgia and nausea. July 5, 1898, sudden profuse gastric hemorrhage. | Pain in the epigastrium constant. Severe hematemesis. | Gastric ulcer. | 9, 26, 1898 | Small erosion on posterior wall which bled *profusely* on handling. Similar erosions found at three other points. | All these points were ligated off with large silk and the stomach wall closed. | Stood operation well. Rectal feeding continued two weeks. Continued to suffer from gastralgia until he left the hospit'l, Nov. 3, 1898. No hematemesis. | Recovery. | Annals of Surgery, 1898. |
| 4 | Armstrong G. E. . . (A) | F. . 35 | Repeated copious hemorrhages from stomach for 7 days. Previous health good; no symptoms of gastric ulcer. Medicinal treatment had no effect upon the hemorrhages. | Blanched mucous membranes. Finger nails white; dyspnea on slight exertion. Temperature on admission, 102.8 F.; pulse, 136; respirations, 44. | . . . . . . | . . | No deeply excavated ulcer was found, but blood was found oozing from three different places which looked like linear fissures. | Hemorrhage stopped by application of the Paquelin cautery. Abdominal incision closed without drainage. | Stomach-feeding began next day. From this time on took nourishment by mouth, rectal-feeding continued 5 days. Woman is now quite well; has perfect digestion; leading an active life. | Recovery. | British Med. Journal, 1899. p. 1087. |
| 5 | Armstrong G. E. . . (A) | F... 46 | Suffered from indigestion for 8 or 10 yrs. Diagnosis of ulcer made 9 yrs. age, at which time she had slight hemorrhage from stom. | Pain, vomiting and recurring hematemesis. | Gastric ulcer. | 10, 12, 1899 | Deeply excavated ulcer on lesser curvature 2 inches from pylorus. Blood flowed freely from several points around margin. | Excision of ulcer. Opening of which extended through pylorus closed as in Heineke-Mikulicz pyloroplasty. | Making a good recovery; 3 weeks after operation she is taking considerable quantities of food without pain or vomiting. | Recovery. | Montreal Med.Jour. vol. xxviii, 933. |
| 6 | Armstrong G. E. . . (C) | F... 31 | . . . . . . . . . . . . . . . . | Indigestion, pain in stomach for two years. Repeated vomiting of small quantities of blood. | Gastric ulcer. | 12, 15, 1899 | Failed to find the ulcer . . . . . | Pyloroplasty . . . . . . . . . . | Excellent recovery; later returned with recurrence of sympt'ms excepti'g hematemesis; treated *medicinally since return*; slowly recovering. | Recovery. | Not reported; details sent in priv'te letter. |
| 7 | Armstrong G. E. . . (A) | F... 27 | Symptoms first appeared in 1892. | Pain in epigastrium with vomiting appearing about 1 hr. after eating In 1895 hematemesis 1 teacupful; Nov., 1899, 2d attack of hematemesis (16 oz.): Jan. 3, 1899, half a chamber vesselful; Feb. 24, 20 oz. Patient blanched, respirations somewhat gaspi'g, Mar. 20 vomited 4 oz. of blood. | . . . . . . | 3, 30, 1900 | On opening anterior wall found blood oozing from several small points which were discolored At cardiac end of stom. was an area 2 in. square situated on ant. wall, which was dark, superficially eroded and from which blood oozed rapidly in considerable quantity from 6 or 8 points. | All bleeding and eroded surfaces touched with a broad Paquelin point. A pyloroplasty was done and the abdomen closed without drainage. | Convalescence to date smooth and afebrile. She is now taking solid food. Has no pain or nausea. She is evidently making blood. | Recovery. | Not reported; details sent in private letter to author |
| 8 | Bircher. . . (C) | F... 36 | [Servant.] Cause of trouble: sausage intoxication. Trouble had lasted two years. | Repeated gastric hemorrhages, palpitation, frequent belching. vomited all solid food, bowels moved once a week; symptoms worse since influenza of 1890. | Dilatat'on of stomach with ulcer. | 12, 14, 1891 | Circular constriction about the pylorus. Stomach dilated. | Gastroplication . . . . . . . . . | No vomiti'g, no succussion splash since operation. Discharged Jan. 5, '92. Gastric disturbances disappeared. Followed case 2 years; no return of symptoms. | Recovery. | Cbl. f. Sch. Aerzte, 1894, 18. |
| 9 | Cázin. . . . (A) | . . | No previous gastric symptoms. | Profuse hematemesis Oct. 7-9-16. Red-blood *corpuscles* 1,600,000. | . . . . . . | 10, 16, 1897 | Stomach normal in appearance; four lenticular erosions on posterior surface in the neighborhood of the greater curvature. | Erosions sutured with catgut. | Discharged in the later part of December in perfect health. | Recovery. | Dieulafoy, Presse Med., 1898. p.31. |
| 10 | Cazin. . . . (A) | . . | One acute hemorrhage from stomach. | . . . . . . . . . . . . . . . . | . . . . . . | . . | . . . . . . . . . . . . . . . . | Ligature of ulcer en masse. . . . | . . . . . . . . . . . . . . . . . | Recovery. | London Lancet, 1898, i, 335. |
| 11 | Curtis, B. F . . . (C) | M.. 37 | April, 1893, man began to suffer epigastric pain after eating. A month later vomited food, mucous, coffee ground matter. He admitted gonorrhea, venereal ulcers and alcoholism. | Pain relieved by vomiting. No improvement on washing out stomach. State of marked emaciation. Patient unable to work. Entered hospital in March, 1894. | Pyloric obstruction probably benign in character. | . . | Ulcer found encircling pylorus. Ulcer measured 2 inches from intestinal border to gastric border. | Incision was extended in the long axis of the pylorus and entirely throu' the disease into healthy mucous membrane; then joined tr'nsversely (Heineke-Mikulicz pyloroplasty with silk sutures.) | Fed 4 days per rectum; then swallowed solid food; no vomiting or pain after operation. Pathologist's report showed no evidence of malignancy. | Recovery. | Annals of Surgery, August. 1894. |
| 12 | Czerny . . (A) | . . | . . . . . . . . . . . . . . . . | Acute gastric hemorrhage. . . | Gastric ulcer. | . . | . . . . . . . . . . . . . . . . | Partial excision and gastro-enterostomy. | Checked the hemorrhage immediately. | Recovery. | Petersen: Deutsche Med Woch. 1899, 24-25. |
| 13 | Czerny . . (A) | . . | Patient brought to clinic in highly anemic state; on arrival had several violent hematemeses. Pulse so weak that operation was postponed two days, then decided to operate despite persistent hemorrhages. | . . . . . . . . . . . . . . . . | Gastric ulcer. | . . | . . . . . . . . . . . . . . . . | Simple gastro-enterostomy performed in twelve minutes, Ulcer not sought for. | Hemorrhage stopped permanently, as though a hemostat had been applied. | Recovery. | Ibid. |
| 14 | Czerny . . (C) | . . | Hemorrhage had occurred a short time before operation. | . . . . . . . . . . . . . . . . | Pyloric stenosis. | . . | . . . . . . . . . . . . . . . . | Pyloroplasty. . . . . . . . . . . | Hemorrhage permanently cured. | Recovery. | Ibid. |
| 15 | Czerny . . (C) | . . | Hemorrhage occurred a short time before operation. | . . . . . . . . . . . . . . . . | Pyloric stenosis. | . . | . . . . . . . . . . . . . . . . | Gastro-enterostomy. . . . . . . . | Hemorrhage permanently cured. | Recovery. | Ibid. |
| 16 | Czerny . . (C) | . . | Hemorrhage occurred a shor time before operation. | . . . . . . . . . . . . . . . . | Pyloric stenosis. | . . | . . . . . . . . . . . . . . . . | Gastro-enterostomy . . . . . . | Hemorrhage permanently cured. | Recovery. | Ibid. |

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| 17 | Czerny . . (C) | . . | Hemorrhage had occurred a short time before operation. | . . . . . . . . . . . . . . . . . | Pyloric stenosis. | . . | . . . . . . . . . . . . . . . | Gastro-enterostomy. . . . . . | Hemorrhage permanently cured. | Recovery. | Ibid. |
| 18 | Elder. . . . (A) | F. . . 42 | No previous gastric symptoms. Sudden vomiting of large quantity of blood (10 oz.); notwithstanding rest and medicinal treatment, hematemesis occurred at intervals next day and night. At 3 p.m. third day she vomited 12 oz. of blood. | Repeated and uncontrollable hematemesis. | Gastric ulcer. | At 5 p.m. on 3d day of attack. | Deeply excavated ulcer, 1 x 1½ inches, found on lesser curvature. In the center of its base was an open artery from which blood was oozing freely. | Catgut ligature was carried thro' the base of the ulcer, just beneath opening in wall of vessel on a curved needle. This arrested hemor. completely; sutures carried across floor of the ulcer; edges approximated; abd'n closed without drainage. | Patient died from acute anemia on the following day. At the necropsy it was found that no bleeding had occurred after the operation. | Death. | G. E. Armstrong: British Medical Journal, 1899, p. 1087. |
| 19 | Elliot. . . . (A) | M. . 47 | [His work entails constant pressure of tools on abdomen.] Markedly tubercular family history; moderate drinker; childhood diseases; rheumatism; morning cough for 30 years; subject to attacks of indigestion. | For the last 3 mos. constant pain in epigastrium not relieved by food; 5 days ago vomited 2 qts. of thick brown matter; since then has had coffee-grounds vomit. | Gastric ulcer with recurring hemorrhage. | . . | Pyloric obstruction complete or nearly so. | Excision of pylorus and all diseased tissue, which included one-fifth of stomach, including the whole of the lesser curvature. | Stood operation well; was fed per rectum; 3d day awoke in pain; temperature rose to 101°; pulse 102; he gradually sank and died; cause of death not positively determined. | Death. | E. G. Cutler: Boston M. and S. Journal, 1897, p. 54, |
| 20 | Foulon and Ravaud. | M. . 40 | Symptoms appeared at 18. Hematemesis at 22 years. Several hemorrhages since that time almost mortal. Permanent milk diet. | Since the onset of hematemesis has had all the symptoms of gastric ulcer; symptoms of progressive pyloric stenosis. Extreme weakness; fresh very copious hemorrhage; vio'ent pain. | Gastric ulcer. Pyloric stenosis. | June 9, 1892. | Pylorus and first portion of duodenum transformed into large callous mass adherent to near organs; 1st loop of duodenum was protruded through a slit in the transverse meso-colon. | Posterior gastro enterostomy. The jejunum was drawn down below transverse meso-colon and circumference of gastric orifice fixed to the lips of the mesenteric incision. | Pain has entirely disappeared. Pat ent eats well; has gained in strength and has never had a return of the hematemesis. | Recovery. | Doyen: Traitem'nt Chirugic'l des affec. a l'estomac p. 332. |
| 21 | Gilford Hastings (?) | F. 19 | [Servant.] Had three attacks of dyspepsia in two years, accompanied by epigastric pain and vomiting; on two occasions hematemesis. | Sudden acute abdominal pain, with tenderness over the whole epigastrium: vomiting. | Gastric ulcer | . . | Ulcer found on greater curvature on anterior aspect of stomach. | Excision of ulcer by a partial gastrectomy. Two rows of sutures of silk-worm gut closed the stomach. | Vomiting and retching continued after operation and lasted until her death, which occurred 32 hours after operation. | Death. | Guy's Hosp. Reports, vol. liii, 1896, |
| 22 | Gilford Hastings (C) | F. . . 30 | Subject to severe anemia when 18 years of age, but never had any form of dyspepsia. | Hemorrhage the one and only symptom | . . . . . . | . . | Stomach explored, but no lesion found. | Gastrotomy. . . . . . . . . . . | Faintness and hematemesis occurred; patient died 9 days after operation; postmortem; large ulcer on posteri'r surface. | Death. | Ibid. |
| 23 | Gilford Hastings (C) | F. . . 32 | [Servant.] History of long periods of nausea, vomiting, pain and bleeding. | At the time of operation, in addition to these symptoms, there were also signs of pyloric stenosis. | Gastric ulcer. Pyloric stenosis. | . . | Stomach bound down by adhesions. No obstructions at pylorus; stomach was hour-glass shaped; no active ulcers found. | Stenosis, dealt with after the manner devised by Heineke-Mikulicz. | Did well for 1 mo.; then a sudden hemorrhage caus'd death; postmortem; very chronic-looking ulcers in dilated first part. | Death. | Ibid. |
| 24 | Grad. Herman. (C) | F. . . 32 | Had been ill for the past two years. | After taking food had pain, nausea and vomiting, with occasional profuse hematemesis. | Gastric ulcer. | . . | Ulcer found on anterior wall near cardiac orifice, about half an inch in diameter. | Excision of ulcer by a partial gastrectomy. | After operation patient improv'd steadily; fed per rectum a few days, then by mouth cautiously. Recovery slow and uneventful. | Recovery. | Med. Rec., N. Y., 1899, lv. |
| 25 | Greer, W. Jones. . . (C) | F. . 28 | Symptoms of gastric ulcer for ten years. | Nausea, vomiting and pain more or less severe, of daily occurrence. Occasional profuse hematemesis. | Gastric ulcer. | Oct. 10 1899. | Stomach dilated; pylorus thickened, principally on the ant. surface; probably large ulcer; other dark spots on ant. surface, probably ulcers; no adhesions. | Gastro-jejunostomy . . . . . . | Did well; convalescence complicated on 14th day by femoral thrombosis; all pain, sickness, discomfort have gone and she is gaining flesh rapidly. | Recovery. | Brit. Med. Journal, March, 1900, p' 574. |
| 26 | Guinard . (C) | M. . 32 | Symptoms had lasted for the last eight years. | Repeated hematemesis and dilatation of stomach. | Pyloric ulcer. | 1. 28, 1892 | . . . . . . . . . . . . . . . | Anterior-gastro-enterostomy. . . | Followed by a rapid disappearance of all symptoms and a gain in weight. | Recovery. | Comte: Med. Week iii, 39, p 459 |
| 27 | Hartmann (A) | F. . . 30 | . . . . . . . . . . . . . . . . | Patient had profuse hematemesis. | . . . . . . | 12, 10, 1895 | An induration was found one centimeter from pylorus. | Gastro enterostomy. . . . . . . . | Died follow'g day; no peritonitis; specimen in Müller's fluid some time; small erosion found. | Death. | Table of Savariaud. |
| 28 | Hirsch (A) | F. . 25 | Symptoms of ulcer for the last 4 years. | Great emaciation; intense anemia; profuse hematemesis in January and March. | Gastric ulcer. | 3, 14, 1896 | . . . . . . . . . . . . . . . | Exploratory gastrotomy. *Digital palpation failed to reveal ulcer.* | Weight increased 24 pounds. *Hemorrhages returned later.* | Recovery. | Berliner Klin. Woch 1896, p. 847. |
| 29 | Jonas, A. F. . . . (C) | M. . 31 | [Laborer.] Had indigestion nearly four years. | Last year repeated attacks of hematemesis, gastric pain, obstinate constipation, occasional vomiting. | Ischochymia pylo. stenosis; chronic gas. ulcer. | . . | Pyloric obstruction; ulcer found in the line of pyloric incision. | Excision of ulcer; Heineke Mikulicz pyloroplasty. | . . . . . . . . . . . . . . . | Recovery. | Western Medical Review, vol. ii, 1897. |
| 30 | Jonas, A. F. . . . (C) | F. . 21 | [Servant.] . . . . . . . . . . . . | For 8 months severe attacks of hematemesis. All kinds of food cause pain. Stomach enlarged. | Ischochymia pylo. stenosis; chronic gas. ulcer. | . . | . . . . . . . . . . . . . . . | Heineke-Mikulicz operation. . . | . . . . . . . . . . . . . . . | Recovery. | Ibid. |
| 31 | Jonas, A. F. . . . | M. . . 32 | [Butcher.] Father died of stomach trouble of 15 yrs. duration Oldest brother complains of stomach trouble. Patient has had gastric disturbances for 15 years. About three years ago he vomited small quantities of blood, which increased in amt. | Painful and resistant thickening below right costal arch. Pylorus palpable as an indurated mass. Seems that the stomach is greatly distended with gas and fluid. | Ischochymia hemorrhage due chr'n. gas. ulcer. Non-malig. pylo. stenosis. | . . | Pyloric wall five-eighths of inch in thickness. Palpation revealed nothing further. Stomach could not be brought out of incision. | Heineke-Mikulicz operation: gauze drainage. | Case looked promising for 3 days. On 4th day died very suddenly. Postmortem showed stomach enormously dilated; contained a gallon of bloody fluid; many small ulcers; many little cicatrices: immediate cause of death, hemor. from small ulcers. | Death. | Ibid. |
| 32 | Keen, W. W. . . (A) | F. . 21 | Previous good health. For two or three days before this attack had suffered with discomfort at pit of stomach. | Nov. 20, 1892, sudden vomiting on two occasions within 24 hrs. of between 2 and 3 pts. of bright red blood; Mar. 3 vomited suddenly 2 oz. pus; '93 to '97 had 4 attacks of hematemesis. | Ulcer of stomach. | 3, 15, 1898 | Nothing revealed at the operation save that the muscular and peritoneal coats externally could be picked up and separated from the mucous membrane with unusual ease. | Exploratory gastrotomy and excision of suspicious spot of ulcerated mucous membrane. | Severe hematemesis a few days prior to operation. Anemia so prolonged that operation was delayed until general condition improved. | Recovery. | Philadelphia Medical Journal, May, 1898. |
| 33 | Korte, W. (A) | . | Profuse hemorrhage some time before operation. | A fresh hemorrhage demanded attention. | . . . . . . | . . | Stomach adherent to pancreas; small ulcer to the left of vertebral column; impossible to remove on account of location. | Cauterization with thermo-cautery; spurting of blood from an ulcerated vessel arrested by sutures with great difficulty. | Patient died on the eighth day. Autopsy showed ulceration of splenic artery. | Death. | Berliner Klin. Woch., 1897, p. 920. |

| No | Operator. | Sex. Age. | History. | Symptoms. | Diagnosis. | Date oper. | Conditions found at operation. | Operation. | Remarks. | Result. | Reference. |
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| 34 | König, Jr.. (C) | . . | . . . . . . . . . . . . . . . . . | Continual hematemesis . . . . . | Gastric ulcer. | . . | Ulcer situated near the pylorus.. | Resection . . . . . . . . . . . | The resulting cicatrix caused obstruction; abdomen re-opened; gastro-intestinal anastomosis; third celiotomy made necessary by closure of this opening. | Recovery. | Phila. Med. Journal, April. 1899, p. 929. |
| 35 | Küster, E.. (A) (C) | F. 23 | [Daughter of day laborer.] Daily vomiting for years; improvement and aggravat'n fluctuat'd until Oct., 1893, when several hematemeses occurred. | Vomtting, profuse hematemesis, inanition from pyloric stenosis. Gastric dilatation. | Gastric ulcer. Pyloric stenosis. | 8, 4, 1894 | Ulcer 5 cm. deep near greater curvature; floor of ulcer large as half dol.; contained cherry stone; pylorus could not be discovered by the finger. | Cauterization of ulcer with thermo-cautery; subsequent gastro-enterostomy. | Hematemesis and pain ceased completely; patient rapidly increased in weight. | Recovery. | Verhand. der deutschen Gesellsch. f Chir. '94, 51 |
| 36 | Küster, E.. (C) | M. 42 | [Stone mason.] Healthy till 36th year; when pain and vomiting commenced; Jan. 12 he entered hospital; shortly after this gastric hemorrhages occurred. | Pain in epigastrium: vomiting; hematemesis; stools black, lower border of stomach three inches below navel. | Gastric ulcer. | 6, 27, 1894 | A tumor was felt on the posterior wall of stomach near the pylorus; a flat ulcer the size of a five-cent piece was seen; pyloric canal somewhat distorted. | Ulcer cauterized with thermo-cautery and a gastro-enterostomy performed. | Patient did well; August 9 had gained ten pounds. | Recovery. | Centralb. f. Chir. 1894, No. 51. |
| 37 | McArdle, J. S . . . (C) | F. 24 | For two years had vomited after meals; hematemesis present; laparotomy done before for this condition, but no effort made to treat ulceration. | Pain; vomiting; hematemesis. . | . . . . . . | . . | Pylorus pushed to the right and lower than usual; 1½ in. from this point, a 3-inch scar extended; chronic ulceration. | Gastro-enterostomy. . . . . . . | She takes coarsest food without experiencing any pain; no hemorrhages from stomach or bowels since operation. | Recovery. | Dublin Jour. of Medical Science, Feb, 1900 |
| 38 | Mixter, S. J.. . . (A) | M. 57 | Began to vomit blood 4½ years ago; continued for 30 days; 11 mos. later had the same kind of an attack. | Pain immediately after eating; vomiting of food and blood. | . . . . . . | 9, 18, 1888 | Pylorus much thickened; owing to the very firm adhesions nothing could be done. | Exploratory gastrotomy; nothing else attempted. | Postmortem showed an oval ulcer on the posterior wall, which had eroded the pancreatico-duodenalis artery. | Death.. | W. W. Connell: Bos. Med. Jo'r., 1889, p. 38. |
| 39 | Michaux... (A) | F. 30 | No previous gastric symptoms. . | Profuse hematemesis October 20, 22, 23, 25. | . . . . . . | 10, 26, 1897 | Stomach apparently healthy at the time of operation. | Gastrotomy; ulcer could not be found. | Hemor. recurred; death on 5th day; ulcer large as 50 cent piece on post. surf., involving mucosa; eroded arteriole was in center. | Death.. | Dieulafoy: Presse Medicale, 1898, p. 31. |
| 40 | Mikulicz... (A) | F. 20 | [Factory girl.] Symptoms of 1 year's standing; for the last eight days hematemesis provoked by the ingestion of the smallest quantity of milk. | Pain, vomiting, hematemesis; inanition; pulse 140; temperature 100.4° F. | Gastric ulcer. | 2, 13, 1887 | One litre of blood in the stomach. Round ulcer on posterior wall 8 to 10 centimeters in diameter; pyloric stenosis; stomach dilated. | Cauterization with thermo-cautery and pyloroplasty. | Death 50 hours after operation; autopsy showed peritonitis localized about the pylorus; sutures held well; hemor. not reproduced; duodenal ulcer. | Death.. | Arch. für Klin. Chir., xxxvii, 79. |
| 41 | Mikulicz . (C) | M. 38 | . . . . . . . . . . . . . . . . . | Symptoms of ulcer for one year; hematemesis. | Gastric ulcer | 12, 5, 1889 | Ulcer of posterior wall involving the pylorus. | Cauterization of ulcer; gastrorraphy. | Death from shock during evening of the day of operation. | Death.. | Marion's Thesis, Paris, 1897. |
| 42 | Mikulicz . (C) | F. 21 | . . . . . . . . . . . . . . . . . | Symptoms of ulcer for eight years; repeated hematemesis. | Gastric ulcer. | 4, 22, 1894 | Small ulcer at lesser curvature; erosion of coronary artery. | Resection of ulcer; curettage; perforation; suture. | In perfect health three years after operation. | Recovery. | Ibid. |
| 43 | Mikulicz . (C) | F. 42 | . . . . . . . . . . . . . . . . . | Symptoms of ulcer for seven years; repeated vomiting of blood. | Gastric ulcer. | 11, 15, 1894 | The pancreas was invaded; the hemorrhage from one artery (not mentioned) considerable. | Cauterization; gastrorrhaphy. . | Died from shock during the evening of the day of operation. | Death.. | Ibid. |
| 44 | Monod . . (A) | . . | . . . . . . . . . . . . . . . . . | Copious hematemesis; dilatation of stomach. | Gastric ulcer. | . . | The ulcer occupied the pylorus . | Anastomosis by Murphy's button, after retroflxation of the large omentum and colopexy by Doyen's method. | Rapid recovery followed; button passed on twelfth day. | Recovery. | J. R. Comte Med. Week, iii. No. 39, p. 459. |
| 45 | Murphy, J. B.. . . (C) | F. 51 | Symptoms of 14 months' duration. | Emesis; hematemesis; emaciation. | Gastric ulcer. | 7, 1, 1899 | Abscess on posterior wall not disturbed. | Gastro-jejunostomy (Woelfler). . | Has gained very much in weight; all symptoms have subsided. | Recovery. | Sent to author in private letter. |
| 46 | Price, J.. . (C) | F. 31 | Typical history of benign ulcer. For a year prior to operation she had frequently recurring small hemorrhages. | Hemorrhages, pain and progressive emaciation. | Gastric ulcer. | . . | Ulcer found at pylorus on posterior wall. | Partial gastrectomy; removal of ulcer and part of gastric wall 1 x 3 inches. | Recovery uneventful; is still living; no symptoms of stricture since operation. | Recovery. | Details sent to author. |
| 47 | Price, J.. . (A) | F. 37 | Hemorrhages frequently repeated in Europe and after immigration to this country, where she was operated on largely on this account. | She had a fresh hemorrhage ab't 3 wks. before oper., leaving her so pale and anemic that operation was postponed until she became in better general condition. | Gastric ulcer. | . . | The ulcer was located on the anterior wall near cardia. | Partial gastrectomy; a portion of the stomach wall as large as the hand was removed with the ulcer. | Recovery uneventful; she is still in good health; no microscopic examination made. | Recovery. | Not reported; details sent to author. |
| 48 | Pringle. . . (A) | M. 38 | [Vanman.] Has had colicky pain in bowels; for 1 week before admission had been drinking more than usual; admitted 4, 28, 1898 on account of severe and sudden hematemesis. | Hematemesis profuse; heart sounds feeble; pulse 120; pallor very great; black, tarry-looking stools; no pain. | . . . . . . | . . 4, 21, 1898 | Nothing abnormal found on interior or exterior of stomach; transverse colon distended and dark looking, apparently from blood in its interior. | Exploratory gastrotomy; not anything found. | Patient died 1½ hrs. after operation; 4 in. from pylorus is a small depressed area size of a 3c. piece; in center of this is an oblique opening into a large branch of gast.-epiploic artery. | Death.. | Glasgow Medical Journal, vol. li, 1899, p. 5. |
| 49 | Robson, Mayo . . (A) | M. 38 | Very weak and anemic; history of hemorrhage; severe; repeated twice in a week. | . . . . . . . . . . . . . . . . | Chron. gastric ulceration with dilatation | . . | . . . . . . . . . . . . . . . . . | Gastro-enterostomy . . . . . . . | . . . . . . . . . . . . . . . . . . . | Recovery. | Lancet, Mar. 10, 1900, p. 683. |
| 50 | Robson, Mayo . . (A) | M. 36 | History of ulcer for more than a year; great loss of flesh and strength. | Severe hematemesis followed in 24 hours by a second attack; pulse 150; very anemic; feared death if bleeding recurred. | . . . . . . | . . | . . . . . . . . . . . . . . . . . | Gastro-enterostomy... . . . . . . | Died on the tenth day of peritonitis; no recurrence of bleeding. | Death.. | Lancet, Mar. 10, 1900, p. 683. |
| 51 | Roux.. . . (A) | M. | . . . . . . . . . . . . . . . . . | Hematemesis one litre, one-half litre, two litres, several days before operation. | . . . . . | . . | Circumscribed ulcer on lesser curvature near pylorus. | Excision of ulcer; ligation of arteries of lesser curvature.. . | Lived several years; owing to reverse of fortune commited suicide; postmortem showed old erosion of coronary artery. | Recovery. | Congres de Chirurgie, 1893, p. 40. |

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| 52 | Roux. . . (A) | F. | . . . . . . . . . . . . . . . . | Profuse hematemeses. Extreme weakness. | . . . . . . | . . | Ulcer at lesser curvature. | Double ligature of arteries of lesser curvature. | Hemorrhage going on at time of operation. Patient 3 yrs. after operation in perfect health. | Recovery. | Toole, of Savariaud. |
| 53 | Rydygier. . (C) | M. 48 | Gastric disturbances for six years. | Hematemesis on several occasions. | . . . . . . | 1894 | A loop of small intestine adherent to pylorus. The endeavor to detach resulted in perforation at point occupied by ulcer. | *Perforation temporarily closed*; pylorus resected; open end of duodenum was brought down into wound in stomach. | *At end of seven weeks the patient* had gained 11 kilograms in weight and digested all his food. | Recovery. | J.R. Comte Med. Week, vol. iii, 39, p. 459. |
| 54 | Salzer. . . (A) | M. | Had a pyloric resection five years ago for pyloric stenosis; appetite good; well nourished. | Taken suddenly with violent vomiting of bright red blood. | . . . . . . | 6, 27, 1899 | Stomach markedly adherent to anterior abdominal wall. Finger could not detect any abnormalities of surface or density of the gastric mucosa. | Exploratory operation; gastric fistula maintained for thirty days. | Died 32 days after oper. Beginning phlegmon of ant. abdom. wall *and mesentery from leakage*. Fresh ulcer on ant. abdom. wall. Eroded arteriole found, branch of cor. artery. | Death. . | Eiselberg: Arch. f. Klin. Chir., 1889, p. 833. |
| 55 | Spencer, W.G. . . (A) | F. 37 | For eleven years had had hematemesis without other symptoms; present attack culminated after several small vomits in one of 1½ pints, half of which was pure blood. | Sudden faintness; acute anemia. Partial unconsciousness. | Gastric ulcer. | 11, 23, 1898 | Puckered induration found two inches from greater curvature at junction of middle and pyloric thirds, with a pulsating artery, running to it about the size of the supra-orbital with a corresponding vein. | Arteries and veins ligated, and supposed ulcers tucked inward by a double row of continuous sutures. | Jan'y, 1900, came spontaneously to show herself in excellent health, *not having* had any hematemesis since oper. One week later had sudden profuse vom. of blood, 2 pints or more. Feb. 27, 1900, a gas.-jejunostomy was done; entirely recovered. | Recovery. | Details sent to author in private letter. |
| 56 | Spencer, W.G. . . (C) | F. 35 | . . . . . . . . . . . . . . . . | Hemorrhage the one important feature. | Pyloric stenosis; dilata. of stomach. | . . | . . . . . . . . . . . . . . . . | Pyloroplasty . . . . . . . . . . . | . . . . . . . . . . . . . . . . | Recovery. | Details sent author; pri v'te lett'r. |
| 57 | Tubby, A. H. . . (A) | M. 27 | Previous to August, 1898, had enjoyed good health; at this time he began to suffer from nausea and heaving; hematemesis occurred on the following dates: Sept. 13, large am't of blood (not measured); Sept. 6, 30 oz. caught and measured; Sept. 20, 40 oz.; Sept. 21, 20 oz.; he probably lost altogether one-third of the total weight of blood of his body. | Uncontrollable gastric hemorrhages. | . . . . . . | 9, 21, 1898 | Patient almost moribund. Operation performed after transfusion and stimulation. On the posterior wall of the stomach, a spot was found, thin in the centre and indurated peripherally. Radiating from it were 3 or 4 thrombosed vessels. Patient at this time became collapsed. | A portion of the stomach wall corresponding to extent of the ulceration was pinched up hurriedly into fold; a continuous purse-string suture passed thro' fold at base, approximating mucous membrane to mucous membrane; sutures were applied near pylorus, 1 in. from the lesser curvature; abdomen filled with normal saline and then closed. | He rallied after the operation. On the 23d he vomited, but no blood was *found in* the vomitus. At no time did his pulse fall below 150 per minute, and his temp. remained subnormal. He died Sept. 30th, nine days after operation. Aut. showed *that ulcer had* been secured. There was no blood in the stomach or intestines. | Death. . | British Medical Journal, 1899, p. 1267. |
| 58 | Tuffier. . . (A) | M. 30 | [Railroad employe.]<br>Entered hospital for hematemesis; *had suffered from gastric* disturbances for more than ten years; a month ago the first hemorrhage from stomach occurred, followed by others on same day, all of which were *abundn't; 2 days before comi'g* to hospital had 3 copious hematemeses; the day before the operation there was considerable melena. | . . . . . . . . . . . . . . . . | Gastric ulcer. | 8, 10, 1898 | The transverse colon was distended, black and opaque, *being filled with blood. The* ulcer was recognized across the posterior surface of the pylorus. The existence of a large group of lymphatic glands along the lesser curvature was *also discovered. The first loop* of jejunum was filled with blood, none being in the stomach. | Gastro-enterostomy (von Hacker's method.) | Death occurred five days later from sub-acute general peri*tonitis. Autopsy showed a per*foration the size of a dime on the posterior surface of the pylorus. Sutures were intact. | Death. . | Details sent in private letter to author. |
| 59 | Tuffier. . . (C) | F. 25 | . . . . . . . . . . . . . . . . | Uncontrollable hematemesis. | . . . . . . | . . | Induration found at the pylorus; encroaching upon anterior surface of stomach. Patient too cachectic to allow of resection. | Gastro-enterostomy . . . . . . . | Since the operation the patient has never vomited. | Recovery | La Semaine Medicale, p. 482. |
| 60 | Tuffier. . . (C) | M. 39 | . . . . . . . . . . . . . . . . | Uncontrollable hematemesis which had led to a grave cachexia. | . . . . . . | . . | At the level of the lesser curvature an indurated portion was felt, adherent to liver. | Gastro-enterostomy . . . . . . . | Died from accidental septic complications, nature which were determined at aut. Gangrene of that portion of liver which had been adher. to lesser curv. | Death. . | Ibid. |
| 61 | Tuffier. . (C) | F. 40 | [Working woman.]<br>Entered hospital for hematemesis; digestion for some time had been good; 7 dys. before admission experienced sud. severe pain in left hypochondrium, radiating to back; she vomited blood several times. | Painful hematemesis, dilatation and tenderness on pressure. | Gastric ulcer. | 8, 6, 1898 | Stomach and duodenum dilated, pylorus permeable. Neither tumor or lymphatic enlargement at any point. | Gastro-enterostomy (von Hacker's method). | The patient left the hospital Sept. 9, 1898, her appetite and digestion being very good. No hematemesis. | Recovery. | Details sent in private letter to author. |
| 62 | Tuffier. . . (C) | M. 42 | [Quartermaster.]<br>Entered hosp. for hematemesis; small hematemeses at distant intervals for 3 yrs.; 18 mos. ago severe gastrorrhagia and vomiting of a pint of blood; hemorrhage was renewed several hours later; next day he had another hematemesis, after which he improved; 6 mos. ago another hematemesis not as severe as the preceding one. | . . . . . . . . . . . . . . . . | . . . . . . | 2, 10, 1898 | A slight induration accompanying a slight constriction of the pylorus, noticed. | Posterior gastro-enterostomy. . . | Patient improved rapidly; at no time has he had any trouble with his stomach since operation. The patient, who was a syphilitic, followed rigorously the specific treatment under which he had been placed. March 15, 1900, in excellent health. | Recovery. | Details sent in private letter to author. |
| 63 | Van Kleef. (A) | F. 37 | Had suffered with gastric disturbance for fifteen years; came under my care in 1876. | Dilatation of stomach. Periods of violent gastralgia vomiting. Several severe gastric hemor. | Gas. ulcer. Pyloric stenosis. | 1, 27, 1882 | Pylorus very much contracted. Round ulcer one centimeter in diameter on anterior wall. | Resection of the pylorus. . . . . | Patient made an excellent recovery and gained in weight. | Recovery. | Centralb. f. Chir., 1882. Band. ix, 46. |

Acute and chronic cases are designated by (A) and (C) under name of operator. Several cases are border-line ones, but we have tried to classify them as accurately as could be done from the information given. One case of Küster's is so doubtful that it is counted as being both acute and chronic. One case is not counted in either class (Guilford's, No. 21).

hemorrhage, operation having been done in a condition of extreme anemia in all of them, as in the cases of Roux, Robson, Caxin, Andrews, and two of Armstrong's cases. There have been thirty-two operations for acute hemorrhage with thirteen deaths or 40.6 per cent. mortality, a much better showing than was made by Mayo Robson, who reported a smaller number of cases, and included also among them cases of vicarious menstruation and post-operative hematemesis, neither of which has any direct etiologic or other connection with gastric ulcer. It will be seen from a glance at the tables—appended—that many operative procedures have been carried out in the treatment of gastrorrhagia, and to those sufficiently interested to study them, the symptoms, condition found at operation, method of operation, and result of each case are given. I wish here to give full credit to my assistants, Drs. W. Hersey Thomas and Stillwell C. Burns, for most valuable assistance rendered in the collection of data and preparation of the tables.

It will not be my purpose here to review the merits of all of the many operative procedures that have been undertaken for the arrest of gastric hemorrhage. This would interest surgeons chiefly, and they will find all information desired in the tables herewith presented, or in an analysis of them by the author in a paper read before the American Surgical Association on May 1, last. Of the dozen methods practiced, the three best are pylorectomy or partial gastrectomy, according to the site of the ulcer, gastroenterostomy, and ligature en masse of the gastric mucosa. The first is ideal surgery, preventing possible perforation and malignant degeneration; the second is practical and oftentimes the best surgery, stopping hemorrhage and favoring cicatrization of the ulcer by putting the stomach at rest; while the third is frequently the most desirable way to end an exploratory gastrotomy when the site of the bleeding vessel was unknown until the stomach was opened. Each method has given good results, but for many reasons the second has been preferred in a majority of instances, and of the many ways of performing gastroenterostomy the posterior or Von Hacker's method with the Murphy button has been, and should be, generally chosen. While hemorrhage per se as a symptom of gastric carcinoma has not, so far as I know, led to an operation, there can be no doubt that in certain cases it will be either so free or of such frequent recurrence as to make one desirable.

Resection, if practicable, is best, but gastroenterostomy would not only arrest the bleeding, but usually delay the inevitable end, and bring about a decided amelioration of all the distressing symptoms. Indicated as it often is in advanced carcinoma without hemorrhage, the presence of the latter as a symptom should be an additional reason for surgical intervention.

*Cirrhosis.*—Hemorrhage into the stomach is a frequent symptom in cirrhosis of the liver, and death resulting therefrom can not be considered as rare. Preble,[12] of Chicago, has recently reported 60 cases of fatal hemorrhage—3 in his own practice, 1 in that of a colleague and 56 collected from literature. The diagnosis in all was verified by autopsy. After a careful analysis of these, a full history of each being given, he draws some interesting and striking conclusions: 1. Fatal gastrointestinal hemorrhage is an infrequent but not rare complication of cirrhosis of the liver. 2. In a great majority of the cases the cirrhosis is atrophic, but it may be hypertrophic. 3. In one-third of the cases the first hemorrhage is fatal; in the other two-thirds the hemorrhages continue at intervals of over a period varying from a few months to several years, the maximum given being eleven years. 4. In one-third of the cases the diagnosis can be made at or before the time of the first hemorrhage. In the other cases the diagnosis can not be made at all or only after a few months or years, during which time other symptoms of cirrhosis have developed. 5. Esophageal varices are present in 80 per cent. of the cases and in more than one-half of the 80 per cent. the varices show macroscopical ruptures, and it is probable that many other ruptures would be found if the varices were tested by injection of air or fluid. 6. Fatal hemorrhages occur in cases which show no esophageal varices, and they are probably due to the simultaneous rupture of many capillaries of the gastrointestinal mucous membrane. 7. The hemorrhages in this class of cases are usually preceded by other symptoms of cirrhosis, but the first symptom may be a fatal hemorrhage. 8. In 6 per cent. of the cases which show esophageal varices was the cirrhosis typical, i. e., showed ascites, enlarged spleen and subcutaneous abdominal varices."

It is certainly interesting to learn that the diagnosis of cirrhosis can be made in only one-third of the cases at the time of the first hemorrhage. A study of Preble's cases along with those collected by Savariaud[13] impresses one with the possibility of an unexpected and fatal gastric hemorrhage in the course of either a latent gastric ulcer or cirrhosis.

I am also impressed with the belief that several of the cases reported as having been operated on for diffused or capillary hemorrhage complicating ulcer were really instances of venous hemorrhage into the stomach on account of an obstructed portal circulation due to cirrhosis. Such cases do not, and can not give as good operative results as in ulcer.

*Treatment.*—It has been suggested that as esophageal varices are the cause of a large per cent. of the gastrorrhagias complicating cirrhosis, pressure should be made on the ruptured varix or varices by introducing a rubber bag into the esophagus and distending it with water or air. This suggestion, so far as I know, has not been carried out. The objections that one can urge against it are manifold: 1. It is questionable whether pressure can be sufficiently protracted in this way to be of benefit. 2. In only 6 per cent. of the cases showing esophageal varices was the cirrhosis typical, and therefore easily diagnosed. It is certainly unsafe to formulate a treatment which at best has only a chance to reach a comparatively small number of cases. 3. The esophageal veins are part of the systemic, while those returning blood from the gastric mucous membrane are of the portal circulation. Therefore, it would seem, *a priori*, that dilatation of the esophageal veins could not occur until there was primarily marked dilatation of the venules of the gastric mucosa, and secondarily enlargement of the connecting veins between the two systems. 4. Hemorrhage from the stomach may result from so many causes that nothing in the way of surgery short of gastrotomy—which discloses the source of the hemorrhage—or gastroenterostomy—which by draining the stomach and placing it at rest, may stop the bleeding—would seem to be indicated.

There can be no reasonable doubt, however, that operations for gastric hemorrhage in cirrhosis have a less promising future than the same procedures in bleeding ulcer; for in the former there is in addition that general hemorrhagic tendency that makes bleeding from any situation most difficult to arrest. We have all realized this, and know how hard it is to permanently control the epistaxis of a cirrhotic patient. Still, while mindful of the difficulties in the way of success, I believe that with limitations surgical intervention may properly be considered. No operation has as yet, so far as I know, been deliberately performed where the diagnosis of cirrhosis had been made. Several of the cases reported and operated on as hemorrhagic ulcers may have been—probably were—instances of cirrhosis.

A study of Preble's cases makes it sufficiently clear that in many instances it is simply impossible to diagnose between the hematemeses of ulcer and cirrhosis. One of them (Case 36), a young woman in her usual health, suddenly vomited a large amount of blood, and a diagnosis of ulcus ventriculi was made without reservation. At autopsy it was found to be a marked case of cirrhosis, and no evidence whatsoever of ulcer could be discovered. The opposite error can as easily be made, as evidenced by Preble's report of two cases seen at the Cook County Hospital with Drs. Walker and Ochsner: "Both were men between 40 and 50 years, hard drinkers for many years. Both vomited a large amount of blood while at their usual work and in their usual health. Neither had any gastric disturbances other than could be referred to the chronic alcoholism. In both the physical examination was negative. There was no change in the hepatic dulness, no splenic tumor, no ascites, no superficial varices, no localized or diffused epigastric tendernesss. The hematemesis continued over a few days, till death. Were they cases of gastric ulcer or obscured cirrhosis of the liver? The general condition of the patients was so good as almost to exclude any thought of carcinoma. The age, sex, and lack of gastric symptoms spoke against ulcer. The negative physical examination spoke against cirrhosis. Fatal hemorrhage from either cause is rare. The post-mortem examination showed that both were cases of gastric ulcer, and the eroded vessel could be seen on the base of the ulcer. There was no suggestion of any change in the liver."

### VICARIOUS MENSTRUATION.

There has been a more or less general sentiment, if not positive conviction, on the part of a majority of the profession, that vicarious menstruation may manifest itself in the way of hematemesis. Such was, too, until recently the general teaching, and there are not wanting those who still believe in the possibility of such an occurrence. If it does happen, one would naturally think that it would be in young women whose ovaries and tubes have been removed, or in women submitted to hysterectomy, the appendages being left, and who can not therefore, menstruate in the natural way. I have written to fifty prominent gynecologists and surgeons to learn if they had seen, and if so how frequently, instances of vicarious menstruation showing itself by hematemesis following removal of the appendages, uterus, or both. Nearly all have answered, and it is a significant fact that only two have reported—each a single case—affirmatively. Yet these operations are very common, one of them having been for many years probably the most frequently practiced surgical procedure. Many of the writers have expressed a positive conviction that vicarious menstruation does not occur. It would seem, therefore, that what has hitherto been a vague impression with most of us is not corroborated by a careful examination of a large number of cases, where it should if it ever occurs.

### POST-OPERATIVE HEMATEMESIS.

I can not find, in any of the text-books on surgery at my command, reference to post-operative hematemesis. It must therefore be rare.

Mayo Robson,[14] in his Hunterian lectures, states that he has encountered it in seven cases of his own, two being fatal, and refers to a similar experience of Eiselberg, who reported to the surgical society in Berlin the details of six cases. It is significant that nearly all of those reported by Robson and Eiselberg were instances of operations on the intestines, omentum, and structures adjacent to the stomach. The anesthetic could not have been responsible for the vomiting of blood, for in one of Mr. Robson's cases cocain was used, and a cholecystotomy for carcinoma of the bile-ducts completed in fifteen minutes. In several others there was no vomiting after the operation. Robson states that in six of the cases the omentum was ligated, and in another it was probably contused. He also says that "in an experiment on an animal multiple hemorrhages into the stomach followed twisting of the omentum."

Mr. Robson has also kindly given me, in a letter, details of a case of stab wound of the abdomen. He says: "I explored the abdomen for a stab wound, and as the patient was vomiting blood, I expected to find a wound of the stomach, but discovered no perforation of the stomach walls, though I had to ligate the superior mesenteric vein, the patient making a satisfactory recovery. The hemorrhage was doubtless due to bruising of the mucous membrane without rupture of the peritoneal coat." The explanation given of the hematemesis in this patient is satisfactory and rational, and could not well have resulted in any other way. I do not, however, understand why operations on the omentum should cause post-operative hematemesis, as I can see no anatomic explanation for it. At first it would seem theoretically that twisting the omentum might force into the venules of the mucous membrane an amount of blood which they could not accommodate, and some weak vessel give way, causing hemorrhage into the stomach, notwithstanding the great capacity of veins to undergo enormous dilatation without rupture.

I have, with the assistance of Drs. Burns and Woody, experimented on four dogs, endeavoring to, if possible, cause hemorrhage into the stomach by rapid and severe traumatism not applied to the stomach itself.

In Experiment 1, a large dog was chloroformed, the omentum twisted into a rope, ligated high up, and then resected. The stomach was at one time cut into and there was no suggestion of even hyperemia from cardia to pylorus. The stomach was removed, tacked on a board and photographed at once by Dr. Kassabian.

In Experiment 2, a medium-sized young dog was chloroformed, the omentum twisted rapidly into a rope, and ligated high up. In addition, I squeezed the spleen and pancreas so forcibly that I ruptured the former to a slight extent, hoping by the compression to force enough blood from these organs whose blood-supply is so intimately connected with that of the stomach, into the gastric mucosa, to cause rupture of some of its vessels. The stomach was immediately opened and found to be perfectly normal in every respect, quite as much so as in Case 1.

In Experiment 3, the dog was chloroformed, the omentum twisted into a rope, and the small intestines were compressed and squeezed far more than would, or could, be done in any operative procedure, Dr. Burns at the same time compressing the liver so as to interfere with the portal circulation. The stomach was then rapidly opened and found perfectly normal. The dogs were not allowed to come from under the anesthetic, and in all the stomach was quite empty, food having been withheld for some hours.

In Experiment 4, a medium-sized female dog was chloroformed, the omentum twisted into a rope, ligated high up and resected. The wound was then closed with ordinary aseptic precautions, and the animal made a rapid and painless recovery. There was no vomiting of blood or blood in the feces at any time during the three weeks that the dog was kept under close observation in the laboratory. She ate well soon after coming from under the chloroform, and never had a bad symptom.

Of the fifty surgeons written to, only nine have seen post-operative hematemesis. Three operators, Johnston, of Richmond, Parish, of Philadelphia, and Wathen, of Louisville, have had one case of gastrorrhagia following hysterectomy. All occurred within a week after operation, one being fatal. Clarke and Noble, of Philadelphia have each seen fatal hemorrhage from duodenal ulcers after operation. The former does not give the exact nature of the operation, but it was intrapelvic. Noble states that his patient was a woman about 60, operated on for ventral hernia. Hemorrhage that was quickly fatal occurred on the tenth day after operation. Autopsy showed a marked duodenal ulceration. Noble and Wathen have each had a fatal case of hemorrhage after nephrorraphy. Noble operated on both kidneys in a young woman. Death occurred on the twelfth day, as a result of hemorrhage from the stomach and bowels. No autopsy was allowed. Wathen's patient was a highly neurotic young woman. She began vomiting blood more than a week after operation, and died two or three days later. There was no autopsy. Johnston has also reported cases of hematemesis following operations for ovarian tumor with a twisted pedicle, suppurating ovarian cyst, strangulated hernia, and extrauterine pregnancy. The first three were fatal and accompanied with general peritonitis; the last recovered. Three others have seen post-operative hematemesis, but it followed operations on the stomach itself; these were apparently cases of secondary hemorrhage, and are, therefore, excluded. I have been particular to make inquiries as to the frequency of hematemesis after hernia operations, as Robson and Eiselberg have both seen it. Of fifty surgeons written to, only two have encountered it, and one of the cases was a strangulated hernia with general peritonitis. The other was a patient operated on for ventral hernia, and who died from a demonstrated duodenal ulcer.

In more than a hundred herniotomies—strangulated and nonstrangulated cases—I have never encountered it. It is possible to quote from only a few of the many surgeons communicated with. W. T. Bull, of New York, writes: "I have never seen hematemesis after any operation. I fancy I have had 650 herniotomies." W. B. de Garmo writes: "I have never seen in any of my own cases one of hematemesis following operation. In replying to your second question I would say, I have done 653 herniotomies; of these 573 have been by the Bassini method for the cure of inguinal hernia." W. B. Coley, of New York, says: "I have never seen a case of post-operative hematemesis. I can not tell how many cases I have removed omentum but in a large number. You could say that in over 700 cases of hernia operations I have never seen it." J. M. T. Finney, of Baltimore, writes: "In my own personal experience, I can not recall an instance of post-operative hematemesis following hernia or any other operation in which the omentum was involved, nor have I known of any taking place in the Hopkins Hospital."

The sum total of all the hernia operations done by the fifty surgeons to whom I have written must be many thousands, and yet but two cases of post-operative hematemesis are reported, and each has been satisfactorily explained, one patient dying of peritonitis following strangulated hernia, the other from a duodenal ulcer demonstrated by autopsy. All of the cases seen by Robson and Eiselberg followed intra-abdominal operations, such also being the case with all post-operative hematemeses reported by American surgeons, excepting two cases where nephrorraphy had been done. In doing nephrorraphy the peritoneum may, in the first place, be incautiously opened by the most careful operator, and secondly, there is always a considerable amount of traumatism necessary to force the kidney into the lumbar incision. It is not, therefore, difficult to understand how a hematoma may easily be produced by the great abdominal pressure oftentimes necessary to bring the kidneys into view, and how, furthermore, this extravasation may occasionally cause sapremia, septicemia, or peritonitis according to circumstances. All septic conditions favor disintegration of the blood-corpuscles and predispose to hemorrhage from mucous surfaces. The gastric mucosa is particularly liable to congestion in conditions of sepsis, both on account of the marked tendency of the thin and more or less disintegrated blood to settle in the internal organs, and the vomiting and retching so frequently present.

We have in this a satisfactory explanation of the rare hematemeses following abdominal operations, and have shown that even violent traumatism to the omentum, intestines, spleen, pancreas and liver did not produce immediate hemorrhage into the stomach in any of the dogs experimented on, and it does not seem unreasonable to suppose that delayed hematemesis will usually depend on disintegration of the blood due to sepsis.

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Supposed Increase of Diseases of Nervous System and of Insanity.—In a recent issue of the *Lancet* (May 26), Professor Erb has been quoted as saying that this increase is due to the causes of nervous irritation and depression, the greater anxiety, hurry and mental toil, the overtasking at school, the increased amount of work necessary to enter the learned professions, the more exciting nature of man's amusements, the more stimulating character of his diet, the restlessness incident to travel—all tending to lead to a nervous breakdown. An increase has been noted in England, America and Sweden, but none in Scotland.

# Address.

## SECTION ON STOMATOLOGY.

### ADDRESS OF CHAIRMAN.*

BY M. H. FLETCHER, M.D.

CINCINNATI, OHIO.

The compliment of having been elected as your Chairman is highly appreciated, but the pleasure is largely counteracted by my inability to return something of value to you in the form of scientific research. I have partly finished a series of investigations on the formation of bone from periosteum, and cementum from the pericementum, but press of other matters did not allow time for their completion, so their results will have to be presented on another occasion.

The symposiums on "Dental Education" and "Interstitial Gingivitis," which are to take up most of the time of this year's meeting, are especially important to us.

Much to the credit of our specialty, it may be said that the past five years have seen great advancement in teaching dentistry, as is shown for instance, by the proceedings of "The National School of Dental Technics" Advancement in the branches discussed at this school, apparently has stimulated greater effort in other departments of dental pedagogics.

As to the diseases of the tissues about the teeth, much can be said at the present time, but it is probable that many more facts will be in our possession at the end of another decade, for to-day finds in the ranks of our specialty, a greater number of trained scientific investigators than ever before, and many of them are giving much attention to the tissues under discussion, both histologically and pathologically, all of which will bring its fruit in due time.

Among other points which are unsettled about this subject is the nomenclature; and the present year seems especially fruitful in new names. When there is a choice of ways, the laws of natural selection usually prevail, and the survival of the fittest is the result. In order that Nature may have an abundance of material from which to select, I wish to add to the already long list of names under discussion, by nominating a term which may be old, but which seems to me to be the one of natural selection as compared with the others suggested, namely, "peridentitis."

"Pyorrhea alveolaris," indicating a flow of pus from the sockets of the teeth, is clearly a poor choice. "Alveolitis" or "chronic alveolitis," suggested by Dr. Henry Nash, does not seem to cover the case in a generic way much better than the former, since the socket, or bone, indicated by the word "alveolitis" is only a part of the tissues involved. The term "interstitial gingivitis," used by Talbot, is admitted by him to be deficient, and it seems especially so as to the term "gingivitis," since this name clearly indicates the gums and no other tissue, whereas all the tissues about the teeth may become involved; so we apparently need a generic name composed of one word in order to be acceptable, and this demand seems to be met in the term "peridentitis," for the following reasons: *Peri* is a Greek term of Latin origin, meaning around, about, or near; *dent*, or *dens*, is the Latin for tooth, and also a Greek term of Latin origin, and a termination used in modern pathologic nomenclature, to signify inflammation of the part indicated. A comparable term to this is that of "periadenitis," indicating inflammation of the tissue surrounding a gland.

The adoption of "peridentitis" or some comparable term used as a generic name, admits of the use of descriptive adjectives for the varieties, specific stages, or pathologic conditions of the tissue surrounding the teeth; for example, acute peridentitis, or chronic suppurative, sloughing, necrotic peridentitis, indicating death of bone, etc.

This term is distinguished from pericementitis, which indicates an acute stage of inflammation of the peridental membrane; and from our standpoint, seems to fulfil the demands in the case, being quite comparable to terms adopted for similar descriptive use in other parts of the body.

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*Presented to the Section on Stomatology, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

# Original Articles.

## DENTAL AND ORAL SURGERY.

### ITS RELATION TO THE GENERAL FIELD OF MEDICINE AND SURGERY, AND THE TRUE PROFESSIONAL STATUS OR RANK OF THE PROPERLY EDUCATED PRACTITIONER OF DENTAL AND ORAL SURGERY.*

BY N. S. DAVIS, M.D., LL.D.

CHICAGO.

The American Dental Association was organized in Washington, D. C., in July, 1860, by twenty-three delegates representing the chief dental societies and dental colleges then existing in the country.

The fifth annual meeting of the Association was held in Chicago during the last week in July, 1865, and its members were welcomed in a brief but excellent address by the late W. W. Allport, D.D.S., M.D., of that city. On the evening of July 27, 1865, during the annual meeting, I had the pleasure of entertaining the members in my own home, and was called on to respond to the following sentiment offered by Dr. C. W. Spaulding, then president of the Association: "To the President of the AMERICAN MEDICAL ASSOCIATION, Medicine, Surgery, and Dentistry, departments of a common science, their disciples should constitute a common brotherhood."[1] I can not now, after thirty-five years have passed, give a better expression of my present views concerning the true relations of dental and oral surgery to the general field of medicine than by quoting a large part of the response made by me on that occasion, as follows: That medicine, surgery, and dentistry are actually departments of a common science, very few will be disposed to deny. I say a "common science" in deference to popular custom. It would be more proper, however, to use the plural form of expression, for what is generally styled medical science is really an aggregation of many sciences and their cultivation with direct reference to the prevention and alleviation of human suffering. The science of medicine properly so-called consists of facts and principles selected from every department of the natural sciences, from philosophy, psychology, political and social economy, and their application to the elucidation of the causes, nature and treatment of such diseases, deformities and injuries as are liable to afflict our race. Therefore, the student of medicine in its general sense is emphatically a student of Nature. And not only so, but he studies the broad fields of Nature for the highest and noblest of temporal objects, namely, to qualify himself for mitigating or relieving the imperfections, deformities and diseases of his fellow men, whether they occur in the teeth, the organs of special sense, the extremities, or the more vital organs within the body.

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*Presented in a Symposium on Dental Education, before the Section on Stomatology, at the Fifty-first Annual Meeting of the AMERICAN MEDICAL ASSOCIATION, held at At[illegible]ity, N. J., June 5-8, 1900.

[1] Chicago [illegible] iner. Sep[illegible]

Medicine, surgery and dentistry are all based on chemistry, anatomy, physiology, pathology and materia medica. Without chemistry and anatomy no one of you as dentists can know either the composition or structure of a single tooth, or its connection with the jaws, gums, blood-vessels, nerves, etc. Without physiology no one could know the natural uses and influences of the several parts just named or the relations of the teeth to the whole processes of digestion, assimilation and nutrition.

As pathology bears the same relation to organized structures in an imperfect or diseased condition as physiology does to them in the natural, so without a knowledge of it, neither the physician, surgeon nor dentist could know anything of the origin, nature and tendencies of the diseases and defects he professes to treat. The materia medica in its full scope includes everything that can be made useful in the mitigation or removal of any of the ills to which our race is liable. The gold that fills the cavity in a tooth, the wash that soothes an irritated gum and the instruments used for adjusting them are as much a part of the materia medica as are the pills and powders administered by the physician.

Consequently, these five branches of medical study are fundamental, and no man can do full justice, practically, to the most limited specialty without a thorough knowledge of them all. Every member of the American Dental Association will doubtless acknowledge that a dentist certainly understands the composition, structure and mode of development of the teeth, together with the causes that render their development defective or induce in them disease and decay. But in every tooth, you have three of the five primary forms of living, structural organization, namely, the fibrous, vascular and nervous, with the peculiar arrangement of inorganic matter to give it solidity.

A knowledge of these structures, whether chemically, anatomically or microscopically, involves a knowledge of the same structure in all other parts of the body. To understand development of a tooth and its appendages from materials furnished by the blood involves a knowledge of the blood itself and of all the laws that govern the intricate processes of assimilation, nutrition and disintegration in living structures generally.

The same remark applies with equal propriety to the causes of imperfections and diseases of the dental organs and the means for remedying them. Therefore, so far as dentistry involves scientific knowledge, as distinguished from a mere mechanical art, it rests on the same foundations and necessarily involves the same series of studies as all other departments of medicine and surgery. The various organs and structures of the human body are not as so many isolated parts, the functions and diseases of which have no influence on each other, but they are so intimately connected and mutually dependent, that not a single morbid impression can be made on one organ that will not exert some modifying influence on all the rest.

The same heart sends the blood to every organ and structure of the body. The same nerve-centers radiate the delicate threads that are to impart sensibility or to command motion in the remotest part of our organization. And the same vital properties pervade every living atom. Every link in the chain of actions constituting digestion, assimilation, nutrition, disintegration and excretion is so connected that not one can be broken without embarrassing the action of the whole. Consequently, it is not possible to comprehend the nature, tendencies and results of the diseases of one organ without studying their influence on all the others, and vice versa. There can be no such thing, therefore, as specialism proper in the study of pathology or the nature of diseases. The whole field must be studied before any one of its parts can be fully understood.

There is still another aspect of this subject that is worthy of a moment of thought. From the nature of the laws that govern mental processes, exclusive practical attention to any one department of a general subject tends to contract and bias the mind by giving undue relative importance to one series of facts, while neglecting another series of equal importance. An evil of much greater magnitude, however, consists in the strong tendency of specialism to encourage incompleteness of professional education. During a connection with medical teaching for sixteen—now more than fifty—years I have rarely found a student who on his final examination proved himself ignorant of some important department without his alleging that he did not intend to practice that particular department and consequently had paid less attention to it. Indeed, incompleteness of education leading to the adoption of partial and restricted views and the universal tendency to neglect whatever is not intended to be turned directly to practical pecuniary advantage constitute the foundation of a large part of the evils that exist in the professions of our country. During the thirty-five years that have elapsed since the first expression of the foregoing views the last-named evil has been developed to an extraordinary degree. Instead of a few divisions of the wide field of medicine, we have seen it cut into almost as many specialties as there are organs or groups of organs in the human body. And we are told that every individual member of the profession should limit his study and practice to some one class of diseases, or to the diseases of some one organ or group of organs. By thus concentrating attention upon a limited number of diseases or injuries, it is claimed that greater skill will be acquired in their treatment and greater advancement in our knowledge of their nature and tendencies. It is also claimed that the whole field of medical sciences with their practical application is so extensive that it is impossible for one man to so master the whole as to properly qualify himself for the practice of all its departments.

This process of reasoning is plausible and to a limited extent true. It is true that in all the mere mechancial arts, the greater the division of labor, and the more perfectly each man is restricted to a certain series of movements, the greater will be the accuracy and skill acquired in their performance.

The dentist who restricts his work entirely to the processes of filling teeth may possibly acquire greater skill in that particular work—provided he has enough of it to do—than he would if in addition he extracted teeth, fitted artificial teeth, treated diseases of the mouth, etc.

The surgeon who restricts himself entirely to the more important and delicate operations on the eye, or the ear, or the blood-vessels, may acquire greater dexterity in performing these operations than if he attended the whole field of operative surgery. But the rule applies only to such operative procedures as are essentially mechanical, and can not be extended to the treatment of the diseases of particular organs without causing much more evil than good, simply because there is no living structure or organ in the body so isolated that its functions both in health and disease are neither influenced by other organs nor by the general functions of the tissue metabolism. Yet to such an extent has specialism been carried, both in education and practice, that we have special colleges not only for the education of dentists, but also for midwives, for psychoneurologists, for electrotherapeutists, for psychopathists, for physicopathists, for osteopaths and even evening or night colleges for the accommodation of those who are obliged to pursue some other occupation for a living during the day. In consequence of all this special or one-sided education, it is quite common to see patients suffering with headaches, indigestion and general prostration vainly treated week after week by local applications to the vagina and neck of the uterus when all they needed was fresh air, judicious exercise and proper diet; or patients suffering with plain scrofuous ophthalmia and being treated exclusively by local applications to the eyes until the edges of the eyelids are being denuded and the cornea ulcerated, when the prompt internal administration of alteratives and tonics in the beginning would have soon removed the whole difficulty; or patients with decaying teeth, diseased gums and aphthous sore mouths being treated solely by teeth cleaning, mouth washes or powders and local anesthetics to relieve pain, when the whole trouble depended on faulty assimilation and imperfect nutrition. Another consequence is that every family, instead of one, needs from six to ten doctors to supply its needs properly. There must be a special obstetrician to see that the children are born properly; another for diseases of the children; a third for the diseases of the mother; a fourth for those of the father; a fifth for the eyes; a sixth for the ears; a seventh for the nose, throat and air-passages; an eighth for the lungs and heart; a ninth for the nervous affections; a tenth for the teeth, etc.

Doubtless before this you are ready to ask if I oppose all specialists in the medical profession. I answer, "by no means." There is a natural basis on which a limited number of specialties can be founded with great advantage; and which indeed develop themselves by the natural and inevitable course of circumstances. For instance, the diseases, deformities and defects of the dental organs, involving no immediate changes to life and requiring for the treatment of many of them a special mechanical manipulation, naturally and almost necessarily constitute a special department of surgery—a department, indeed, that should be regarded as equal in importance and dignity and consequently requiring equal education with every other branch of the profession. Those conditions of the eyes requiring delicate and dexterous operations are also mostly chronic and allow the patient time to seek and obtain the services of men who have acquired more than ordinary skill in the performance of such operations. The same is true of those conditions requiring the most dangerous and difficult surgical operations on other parts of the body, such as lithotomy, ovariotomy, the ligating of large and deep-seated arteries for aneurysms, etc.

Hence it is eminently proper that in all large cities where the required opportunities are afforded, men should devote special attention to such departments. But this can never justify or excuse any class of medical men for being content with only a partial medical education. In strict harmony with the foregoing views, several of the leading dentists in New York, Chicago and other cities, who had studied medicine as a whole and received the degree of M.D., became members of the local medical societies; and from these they were sent as delegates and became members of the AMERICAN MEDICAL ASSOCIATION. They were not only treated as actual members of the "Common Brotherhood," but at the annual meeting in Richmond, Va., in 1881, on the motion of the late Dr. Samuel D. Gross, seconded by Dr. L. A. Sayre and myself, a section of dental and oral surgery was created on the same footing as all the other Sections of the ASSOCIATION. The Section was organized by the appointment of Dr. D. N. Goodwillie, of New York, as chairman, and Dr. T. W. Brophy, of Chicago, as secretary, and it has maintained an active and honorable existence to the present time, as your presence here to-day abundantly attests. To still further promote the union of dentistry with all the other legitimate departments of medicine and surgery, at the annual meeting of the AMERICAN MEDICAL ASSOCIATION in Chicago, in 1887, the following resolution was adopted by nearly a unanimous vote:

> *Resolved,* That the regular graduates of such dental schools and colleges as require of their students a standard of preliminary education and a term of professional study equal to the best class of the medical colleges of this country and embrace in their curriculum all the fundamental branches of medicine, differing chiefly by substituting practical and clinical instruction in dental and oral medicine and surgery in place of clinical instruction in general medicine and surgery, be recognized as members of the regular profession of medicine, and eligible to membership in the ASSOCIATION on the same regulations as all other members.

Obviously there is no more propriety in having a separate profession of dentistry, than there is of ophthalmology, or neurology, or gynecology. The same standard of preliminary education and the same curriculum of medical studies covering the four years' course should be required of all who propose to practice in any of the departments or specialties of medicine and surgery. All should be required to pass the same rules, both ethical and legal. Let there be in every medical college faculty a professor of dental and oral pathology and practice on the same basis that you have a professor of ophthalmology, neurology or gynecology.

The instruction by an efficient occupant of such a chair is needed as an important aid to every practitioner of medicine, whether his field of practice is in the city or the country. For if he never attempts to treat a defective tooth or a diseased gum, he should be able to recognize the existence of such conditions and promptly direct the sufferers to those who would treat them. And for those members of the college class who intend to make dentistry their special field of practice, it would only be necessary to supplement their general course by from six to twelve months of post-graduate mechanical and clinical dental work, as do most of those who choose other specialties after their graduation. By thus unifying all departments of medical and surgical practice, including dentistry, under the same educational standards and the same title of Doctor of Medicine, the influence of the profession would be increased. Better economy could be practiced, ina[illegible] it would [illegible] pense with the necessity for p[illegible] arate [illegible] tories and professorships for [illegible] tal st the fundamental branches of medical science, as well as separate state boards of examiners, and some embarrassments pertaining to professional rank and position would be removed.

At the first annual meeting of the Section, in connection with the AMERICAN MEDICAL ASSOCIATION, in 1882, one of its members presented an interesting paper on the importance of having dental practitioners for both the army and navy service, and the need of such has become so apparent since the war with Spain that serious propositions have been made in government circles, to have at least one dental and oral surgeon appointed for every 1000 enlisted men in the military service. But if they are not fully educated and graduated M.D's., can they rank as regular members of the army and navy medical corps? Or will they be ranked simply as artisans? These same questions were raised recently on a proposition to appoint a dentist on the staff of one of the London hospitals. Another important embarrassment arises every time a dentist educated in an exclusively dental college desires to become a practitioner of medicine. In his application to a medical college, he always insists that he ought to be graduated M.D. by simply attending the senior year of the medical college, when not one out of twenty of such applicants has been educated in either anatomy, physiology, pathology or materia medica and therapeutics, and it is practically impossible for him to make up these fundamental deficiencies while attending the practical and clinical instruction of a senior year.

This, however, brings us back face to face with the most radical evil that pervades all departments of professional education in our country, namely, the dominant spirit of commercialism that is ever ready to sacrifice mental discipline, breadth of knowledge and soundness of judgment for whatever leads most directly to the chance of earning the dollar.

# COURSE OF STUDY.*

BY W. A. EVANS, M.D.

CHICAGO.

In preparing this paper I have had before me the time cards of several of the very best dental schools that this country has produced. Some of these have rather nominal university connection; some have considerable university control; some have close medical school affiliations. Such figures as I use are obtained by averaging those derived from these schedules.

The question is not one of condemnation of the dental course as now existing. Lest there be some misunderstanding in this regard, I hasten to say that the average dental course is better than the average medical course. I will even state the matter more strongly: For the average dental student any good dental course is better than is the best medical course for the average medical student.

Unquestionably the past demand has been, and the present one is, for a dentist who can meet the ordinary questions that arise in the course of dentistry without any special reference to the more abstruse or remote problems, or to the more remote bearings of ordinary problems. This demand is changing, and the dentist of the future who succeeds will be a man somewhat differently educated.

If I may institute a comparison between the medical and dental courses, I should call attention to these facts: A small proportion of the medical graduates go through hospitals, thus learning the handling of patients, the every-day care for medical details and the bearing of responsibilty, whereas, every dental student has two years of practical ordinary work in which he learns the handling of patients, the every-day care of dental details, the doing of things and the bearing of responsibility.

This matter of responsiblity is no small item. When we must suffer the consequences or gain the rewards of a certain position, we learn that position more accurately, more judiciously and more permanently than we could ever have learned it otherwise. The medical dispensary in efficiency is not to be ranked with the dental infirmary.

When all this has been said, the fact remains that we do not make of the dentist as broad a man as is possible. In looking over these catalogues I find that 59 per cent. of the professors of the dental schools investigated have some professional title in addition to their D.D.S., or without the D.D.S. I do not refer to literary degrees. This is evidence of recognition of the truth of my statement on the part of these men whose brains have put them in positions of authority.

How are we to increase not only their breadth, but their desires for greater breadth? The second clause is more important than the first.

In averaging these time-cards I find that in the first year in prosthetic technics, prosthetic dentistry and other purely dental subjects, an average of sixteen hours a week is spent. In anatomy, physiology, chemistry, histology, bacteriology and materia medica twenty-one hours are spent. If we figure on Dr. Bayard Holmes' basis of two hours of preparation and one of recitation constituting an hour of study, then the twenty-one devoted to foundation work would increase perceptibly. Nevertheless, when we compare the number of hours of preparatory study required by the dental student with the preparation time required by the medical student, we find that the first year in dentistry does not require as much work as the first year in medicine. It would be advisable to make several changes. One would be to add a competent course in physics. It is usually given in connection with chemistry or made a nominal entrance requirement. The importance of this subject is so great in dentistry that it requires special consideration: it should not be left to the hazard of an entrance requirement. Dental physics also should be taught.

I find but little reference to embryology and comparative anatomy. Yet, when you finally solve the disease known as pyorrhea, you will have to thank the dog. There are any number of dental diseases apparently impregnable, whose flanks can be turned through knowledge of the lower animals.

I do not know whether I would decrease that average of technics in the first year or not; but the number of hours devoted to the broader subjects ought to be increased. I find one school scheduling infirmary in its first year. This is wise. It seems desirable to put the student in the infirmary in the beginning of his work. A proper plan would be to assign each first-year man to a third-year man, and have the former serve the latter in the capacity of an assistant. He would do no work, but would watch the senior, wait on him, dry cavities, etc. The advantage of this would be twofold. It would give the senior confidence and self-control. It would save his energies. It would increase his observation and his mental acuteness. The first-year man would gain in many ways. Most important of all would be the fact that it would give him an idea as to the dental bearings of anatomy, histology, chemistry, etc. The declaration of Mr. Flannagan, of Texas, to-wit: "What are we here for?" has been somewhat lost to sight. While we must ever broaden, we must always remember that the object is to make a dentist a broad, learned, growing, developing dentist, but always a dentist.

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*Presented in a Symposium on Dental Education, before the Section on Stomatology, at the Fifty-first Annual Meeting of the AMERICAN MEDICAL ASSOCIATION, held at Atlantic City, N. J., June 5-8, 1900.

Coming to the second, or junior, year we find that the infirmary gets an average of eight hours a week on the assignment schedule. In a few schools the infirmary is conditional. The purely dental subjects get an average of sixteen hours. This includes prosthetic technics, orthodontia technics, prosthetic dentistry, operative dentistry, instrumentology, oral surgery and orthodontia. Other subjects, such as anatomy, physiology, pathology, bacteriology, chemistry, and materia medica and therapeutics get sixteen hours. My general criticism of the first year would apply with more force here. The disproportion is too great. There should be less of technical, laboratory and didactic instruction, and more of other work: less of the art, and more of the science of dentistry—dentistry broadly considered.

In the third year I find infirmary gets an average of twenty-five hours. In my observation the student actually puts in over twenty-five hours. To orthodontia, oral surgery, operative dentistry, prosthetic dentistry, porcelain and bridgework, and applied pathology, eight hours are given; to other subjects about three hours. The crticism that I would make here is that too little study is required of the senior student. He is kept busy during the day, but the system of clinics and lectures without quizzes does not employ all his time. This is bad, because in this way he fails to get the full advantage of what is going on around him and thus gets out of the habit of studying while he is still in the school.

Finally there are two general considerations to be noted. The dental course should be a four years' course. The criticism against lengthening the medical course does not apply here, for you keep your student far better in contact with his ultimate aim, and there is little danger of your making a scientist and ruining a practitioner. The dentists now practicing want it; the people do not oppose it. It rests with the possibility of unity in the dental faculties.

The second general point is this: Dentistry suffers whenever it is dissociated from medicine. They are not only natural allies; they are of the same body. Any effort at dissociating them tends to make of dentistry an art and possibly a trade rather than a science. Therefore, every possible effort should be made to hold them together. That which a young man gets in college comes in two general ways—what he gets from lecturer and demonstrator, and what he absorbs from his atmosphere. The latter transcends the former. Believing this, I must think the medical schools and the dental schools should be joined; that certain classes should be taught in the same section rooms; certain subjects should be covered in identically the same way; certain aims should be common, and association between the student should be free and untrammeled. This does not mean any loss of dignity to that which is properly a specialty, but it means an added dignity from an equal position in a great sisterhood.

103 State Street.

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# TECHNICAL VS. THEORETIC TRAINING.*

BY JOHN S. MARSHALL, M.D.

CHICAGO.

The subject which has been assigned to me seems to contain some very interesting and serious questions which lie at the very foundation of the present system of training in our American dental colleges.

This is a practical age and Americans are a practical people. Our public educational systems are all planned on the basis of practicality. To our people an education which does not fit the young man or the young woman for the practical, every-day affairs of life is looked on as being of little value. The great aim in life of the average American citizen is money-getting, and therefore the education which does not fit him to obtain the object of his ambition is in large measure valueless to him.

This desire for money-getting permeates the professions to such an extent that the young men who seek to enter their ranks are ambitious to reach the goal by the shortest possible road, and by the least expenditure of money that will fit them to begin the earning of a livelihood, rather than to prepare themselves in every possible way and in the most thorough manner for the duties and responsibilities of their high calling, regardless of the time and money spent in the preparation.

This desire to enter the professions with the minimum of preparation that will enable one to compass a living does not have a tendency to raise professional standards either in culture, scientific attainments, or ethics. In fact, the whole tendency is degrading and can work only ill to the honor of the profession, to the individuals who thus prepare themselves for the duties of professional life, and to the innocent public on whom they practice.

This commercial spirit in the professions has made it possible for any small coterie of men, imbued with the money-making and advertising spirit, to establish a college for the avowed purpose of educating young men and women for a professional career—especially in medicine and dentistry—but in reality for the covert purpose of gratifying their ambition for money-making and to see their names in the public prints, and this many times with no regard to an honest return to the student in the way of sound professional teaching for the money paid into the treasury of the institution.

Even the best of the professional colleges are not entirely free from this commercial spirit and they vie with each other in their ambition to increase their student body beyond that of their neighbor, employing means sometimes which are not entirely above reproach. On the other hand, many of the better class of dental colleges have been striving to deal honestly with their students, and to give them the best professional training that the time and the money invested would permit. To this end they have arranged their courses of instruction with the view of giving their students a good technical training in all that pertains to the purely mechanical and operative departments. But, in striving to attain the highest development of the student in these directions, the equally important work relating to the fundamental medical sciences, which are the basis of our knowledge of health and disease, and which govern the treatment of disease in all its forms, has not been studied with the same degree of energy, nor has it been given the prominence in the curriculum which its importance deserves. As a result of this, the dentist who is graduated from our colleges to-day is a first-class jeweler, capable of making the most beautiful pieces of crown, bridge or plate work, and inserting the most brilliantly finished gold fillings, after the latest and most approved methods of cavity preparation, anchorage, condensation and polishing. But what is all this worth to the patient if, through ignorance of the laws which govern the resistance of tissues to irritation, or of the principles of antiseptics, a pulpitis follow the insertion of such a filling, or because of improper treatment of a septic root canal, the crown or bridge is lost by reason of the development of alveolar abscesses which might have been avoided by a proper knowledge of the principles of antiseptics and of surgery?

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*Presented in a Symposium on Dental Education, before the Section on Stomatology, at the Fifty-first Annual Meeting of the AMERICAN MEDICAL ASSOCIATION, held at Atlantic City, N. J., June 5-8, 1900.

What can be said of a system of teaching which fails to prepare the graduate of dental surgery to distinguish the differences between a case of aphtha—common canker-sore mouth—and a syphilitic mucous patch? How many really know the differential diagnosis between these diseases? Syphilis is so common in these days that the dentist needs to be well grounded in the clinical aspects of the disease in order to guard his patients and himself from inoculation.

Again, if the dentist has not a good knowledge of the anatomy, physiology and pathology of the nervous system how can he diagnose a case of reflex neuralgia of the fifth nerve from a case of hyperemia of the pulp in a tooth which gives no external evidence of injury or disease of the crown? It is not sufficient that he have a good knowledge of the anatomy of the teeth, and of the bones, muscles, blood-vessels, nerves and glands of the mouth and jaws. He must have a wider range of knowledge than this implies, or else he will never occupy that exalted plane of professional equality with the members of the medical profession which it is his right and duty to do.

Dentists sometimes complain that their medical brethren do not always treat them with that degree of respect which is due to them as professional equals; that they are not consulted as to the best method of treatment to be pursued in a given case of dental or oral disease; and that the physician presumes to dictate as to what shall or shall not be done rather than to advise with the dentist as he would with the oculist, the laryngologist or any other specialist, in a case that came under their especial departments.

When much lack of courtesy occurs on the part of the physician, it may usually be set down either to prejudice and narrow-mindedness or to some unfortunate experience, for it can not be said that dentists have never given their medical brethren cause to doubt their ability to render an intelligent diagnosis in certain oral diseases, or to treat such cases after the most scientific methods.

Thirty years ago a large majority of the rank and file of the dental profession were without college training, and consequently held no professional degree, while many of them were positively ignorant of all that pertained to the art of dental surgery save the extraction of teeth, the making of a rubber plate and plugging a tooth with amalgam or gold. Under such circumstances it was no wonder that medical men of education did not feel justified in calling such dentists in consultation over serious cases. The educated dentist, however, has never had cause to complain of his treatment by the cultured medical man, for no class of men are more anxious to divide the responsibility of a case calling for special knowledge than is the educated, cultured physician. No man more fully realizes than he that the field of medicine has become so large that it is impossible for even the most brilliant mind to acquire all the knowledge comprised in the various branches of medicine and surgery, or even to completely assimilate all that belongs to a single department, and therefore he is glad of the opportunity for the good of his patient and the relief of his own mind, to call in consultation a man more eminent than himself in that particular department, by reason of his superior knowledge and skill.

Technique or technical training, as it is generally understood to-day, was not a realized fact ten years ago. At that time the system was still in the embryo stage. The idea was in the minds of a few progressive men who realized the great need of more careful training in the manipulative departments of dental surgery. Little by little a system has been evolved which covers the entire field of mechanical and operative dentistry, so that to-day in our best institutions it would be difficult to plan a more thorough course of instruction in these departments.

The difficulty, however, lies in the fact that so much time is being spent in the manipulative training of the student that his scientific education is being neglected, and instead of making scientific practitioners out of our students, we are training them largely as mechanics and artisans. Do not misunderstand me on this latter point, for I would not have his technical training made any less thorough or complete than it is to-day, for manipulative skill of the very highest order is required in the first-class dental surgeon. But he needs much more than this if he is to intelligently meet the grave responsibilities of his calling. The health of his patient, and often life and death, wait on his decision in the treatment of many forms of dental and oral diseases. Is it not therefore of vital importance that he should be well grounded in all of those scientific departments of study which are the foundation of a broad medical education—anatomy, physiology, histology, pathology, chemistry, materia medica, therapeutics and surgery? How can he recognize morbid conditions if he knows little or nothing of the normal appearance of tissues or of the physiologic functions of the various organs, parts and systems of the body, and their interdependence on each other? How can he hope to successfully treat even the ordinary forms of disease which belong to his specialty if he is deficient in the knowledge of general and surgical pathology, or of the administration of remedies and their therapeutic effects?

What the profession needs to-day is not less technique, but a more thorough training in those sciences which make the intelligent physician and surgeon.

The question which very naturally arises in the consideration of this subject—provided that you agree with me that this training in the general medical sciences is necessary—is how may this scientific education be obtained?

I would suggest: 1. So elevate the entrance requirements that only the most intelligent and studious can hope to gain admission to the dental colleges. 2. Lengthen the college course to four years of nine months each. This would give ample time for the most thorough training. 3. Place the dental students in the same classes with the medical students for the first two years of the course of study, and require them to take the same work and pass the same examinations; and during the last two years devote all the time to those subjects which pertain to dental surgery. 4. Graduate no student who has not fulfilled all of the requirements of the course.

But then, the commercial spirit again comes to the front, and contends that such a movement would ruin our schools. If such schools were organized for the purpose of *just making money,* then the sooner they disappear the better. There are already too many schools in existence and only the better ones should live.

If dental surgery is a department of medicine, then let it place itself on the same plane with the other learned professions. But it can do so only by adopting the same high standards of culture, professional attainments and ethics.

34 Washington Street.

# ENCOURAGEMENT OF HIGHER EDUCATION AND ORIGINAL RESEARCH.*

BY WM. ERNEST WALKER, D.D.S., M.D.

PASS CHRISTIAN, MISS.

I have the honor of submitting for your consideration the following outline of a plan which has for its object the encouragement of higher education and original research. To this end I propose that the Section on Stomatology of the American Medical Association take steps to acquire the power or authority, whether by charter or otherwise, by virtue of which it may be empowered to confer on deserving individuals, regardless of sex, the degree of S.D., *Stomatologiæ Doctor*—Doctor of Stomatology—and in order that this degree may stimulate to higher education and original research I would recommend that this degree be conferred strictly and only on compliance with the following requirements: 1, that the recipient shall be of good moral character and in good professional standing; 2, that he shall have previously acquired the degree of M.D. from an institution not conferring the degree of M.D., subsequent to 1903, on less than the requirement of an attendance on four sessions, of not less than seven months each, in four different years; 3, that he shall also have taken a course on the mouth and its associate parts; 4, that he shall have made some original, meritorious and valuable contribution to stomatology; 5, that this degree shall not be conferred except on the unanimous vote in the affirmative, of all the members present at the meeting at which this action is contemplated.

Dentistry stands to-day as the only specialty in medicine which does not universally require the degree of M.D., as a prerequisite to entrance on the practice of a specialty: but it is a source of gratification to see that in the United States the number of dental practitioners with the degree of M.D. is increasing annually.

In the State of Virginia, of the graduate dental practitioners enrolled in Polk's Dental Register (1898), 14 per cent. have the degree of M.D., and I have no doubt that the forthcoming edition will show a greatly increased percentage, as I personally know of a number who have acquired it since 1898.

I believe that offering the stomatologic degree, as outlined above, as a goal to be reached only through the previous acquirement of the medical degree in addition to the course on the mouth, will serve to stimulate a greatly increasing number to acquire that degree and thus receive the benefit of its broadening and elevating influence.

I need not argue, before this body, the propriety of the provision that the recipients of the degree S.D. be required not only to hold the degree M.D., but also to have taken a course on the mouth and its associate parts. You will note that the requirement that the M.D. shall have been conferred by a college not conferring the degree *subsequent to 1903* on less than the requirement of an attendance on four sessions, does no injustice to those having received the M.D. previous to the inauguration of the four-year course, provided that their alma mater discontnued, before 1903, the shorter course previously *en régle;* thus having the assurance that the standard was high, considering the time at which the degree was conferred.

The fourth requirement entitling the recipient to the degree S.D. is that not only shall he have made some addition to "the sum of the scientific knowledge concerning the mouth," but such additions shall not only be *original* but they must be also *meritorious;* and not only "original and meritorious" but also valuable.

Original work may be meritorious because of the labor and self-sacrifice which the work represents, but it may nevertheless, in its final result, be practically valueless to stomatology: wherefore, the three qualifying terms —original, meritorious, valuable.

The fifth requirement, that the degree S.D. be granted only with the unanimous consent of the members present at the meeting at which this action is contemplated, together with the other four requirements, sufficiently guards against the degree ever being conferred except on fully deserving individuals.

I also beg to submit the following as a suitable form, certifying to the granting of the degree of S.D. by this Section:

AMERICAN MEDICAL ASSOCIATION.

*Section on Stomatology.*

To all those to whom these presents shall come, greeting: Know ye that by virtue of the authority vested in the Section on Stomatology of the American Medical Association, we, the members voting unanimously in the affirmative, do this day confer on X Y Z, M.D., the degree of S.D.—*Stomatologiæ Doctor*— in recognition of his original, meritorious and valuable contributions to the sum of the scientific knowledge concerning the mouth; he having complied with the following requirements, *to-wit,* that no person shall receive this degree except that: 1, he shall previously have acquired the degree of M.D.; 2, he shall have taken, in addition, a course on the mouth and its associate parts; 3, he shall have made some original, meritorious and valuable contribution to stomatology; 4, it shall have been unanimously voted by the members present that the degree be conferred on him.

Wherefore, we, the members of the Section, have caused to be affixed hereunto the signatures of the acting chairman of the Section and of the three last retired chairmen, and of the present Secretary; the same to be stamped with the seal of the Section on Stomatology of the American Medical Association.

Thus briefly outlined, I submit this project and hope it may receive favorable and earnest consideration.

[The other papers presented in the Symposium on Dental Education will appear in subsequent issues of The Journal. —Ed.]

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The Mutual Life Insurance Company of the Physicians of Paris is a new organization, recently founded by certain members of the profession at Paris. Membership is limited to physicians under 50 years of age. The [illegible] ual fee is [illegible] company will start with $200 [illegible] ximum [illegible] family of a deceased member, b [illegible] iety [illegible] sum will be increased.

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*Presented in a Symposium on Dental Education, before the Section on Stomatology, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

# MEDICINE AND DISEASE IN PHILIPPINES.

BY DAVID J. DOHERTY, M.D.
CHICAGO.

This subject should be treated by some one who has personal information, but our army and navy medical officers have doubtless been too much occupied by their duties to indulge in study or composition. The medical department at Washington has as yet issued no reports, while standard works on geographic pathology give but little attention to the Philippines, and original ones by Filipino or Spanish authors are not accessible to many American readers. Yet the Philippine Islands, with their teeming millions of inhabitants, are on our hands and we must face our duty toward them. All this is my apology for presenting this paper, which contains in condensed and systematized shape all the data that I have gathered from a number of authorities, whose titles are given in the bibliographic index at the end of the article.

Modern medicine bases its classification of diseases on etiology; and with the aid of bacteriology is rapidly studying and cataloguing the etiologic factors of disease. Still we have not yet advanced far enough to dispense with the old views as to the influence, causal or conditional, of physical environment, such as climate, temperature, food, etc. These factors must still remain, if not as causes, at least as conditions. They may be the *tertium quid,* the copula between the microbe and its victim, increasing or inhibiting its potency or virulence, and hence it is necessary to mention briefly the climatic conditions of the islands.

The Philippine archipelago possesses "a singular variety of climate." (Encyclopedia Britannica.) This is due to its extent, from the fourth to the nineteenth degree of north latitude; to the division of its surface into innumerable islands; to its many channels and currents, which carry the winds of the Pacific; to its chains of mountains, their altitude and direction; to the fact that the warm equatorial current tilts full against it and sweeps northward along by it; and, chiefly, to its location in a direct line between the varying atmospheric pressures of the table-lands of Asia and Australia. This condition explains the contradictory statements of travelers as to its climate, the paradox that the portion nearer the equator is more healthful than the northern islands, and the fact that it is an exception to the rule of double alternating wet and dry seasons which characterize equatorial lands. Its location exposes it to the sweep of the monsoon, which blows during the northern winter from the high-pressure atmosphere of Asia to the low-pressure atmosphere of Australia, and in a reverse direction during the northern summer. The result is a general division of the year into two portions: that in which the northeast monsoon blows, or from about October till February; and that in which the southwest monsoon prevails, from June till October, with an interval of calm. The first period is cool and dry, the interval very hot, and the second period wet. As may be inferred, no absolute statement as to the date of occurrence and the duration of these periods can be made, for they vary in different islands.

The temperature is high and constant, its mean ranging, according to latitude from 72 to 81 F. in the cold season; 88 to 82 F. in the hot season; and 87 to 83 F. in the wet. It must not, however, be inferred that one can not feel cold there, for especially at night, even at the sea-level, I have noted that travelers sometimes speak of "an overcoat being agreeable," of "blankets being desirable," of "being numb with the cold," etc. The humidity is rather uniform. The rainfall at Manila in inches averages 8.6 in the cold season, 10.4 in the hot, and 36 in the wet. At Sulu, the range is 15, 33, and 25 inches, respectively, in the same seasons. The barometric excursion is between 755 and 762 mm. Atmospheric electricity is considerable, almost every night showing flashes, and during the wet season thunderstorms are of almost daily occurrence. At the change of the monsoons, which takes place near the equinoxes, and especially at the autumnal, violent winds occur, sometimes causing typhoons or cyclones.

A knowledge of these meteorologic data is necessary in order to study the nature and etiology of the diseases, which exist in the archipelago, and to determine rules of public hygiene and private health. The high temperature and the humidity induce an excessive action of the skin. This constant diaphoresis is the cause or occasion of some of the many skin diseases that prevail there. Continued hyperactivity of a tissue leads eventually to atrophy or paralysis, and the way is opened to other skin diseases. Constant thirst is another sequela, and this leads, more by its too generous gratification than by its neglect, to anorexia and various forms of dyspepsia. Diminished urinary secretion is another which leads on its own cortege of ailments. Muscular lassitude and weakness, inactivity and curtailed respiratory action are also effects and in turn become causes. Any lesion in the delicate physiologic mechanism impairs the function of other parts, and the door is opened to all the endemic, epidemic and sporadic diseases, which make up the nosology of the Philippines.

It must not be inferred that the climate of the Philippines is deadly. On the contrary, it is the most healthful of any in the tropics. But the physical conditions which determine the growth and spread of germs and which affect the susceptibility of the human race prevail more in the tropics than elsewhere. Hence, it follows that neither the individual nor the race inhabiting the tropics can be as healthy or as vigorous as those in the temperate or sub-arctic zones. It also follows that, notwithstanding the help which Nature gives him by its monsoons and typhoons, man himself must obey every rule of hygiene and every precaution of experience in order to hold his own in the struggle for existence.

My review of the diseases which occur in the Philippines is drawn principally from Barcones' 'Estudia para una Nosologia Filipina." Dr. Barcones was a surgeon of the Spanish navy, who spent two years in the hospitals at Cavite, Zamboanga, Joló and Manila. In scientific insight, common sense and clearness, his work is fully equal to any similar book in French, German or English. I have also read Cavada's "Historia Estadistica," a huge accumulation of more or less reliable data arranged by provinces and gathered from reports of Spanish officials. These data, when tabulated, enable us to judge the relative frequency of diseases, though the popular and symptomatic character of the diagnosis robs them of scientific value.

The first place in frequency is occupied by fevers: the malarial form predominating, the others being typhoid, malignant, putrid and catarrhal. Next in order come dysentery, phthisis and other pulmonary affections, skin diseases, colics, convulsions, leprosy, smallpox and buboes. The table also contains the names of cholera, rheumatism, inflammation of the eyes, dropsy, measles, erysipelas, paralysis and worms. Finally are mentioned two diseases by their native names, *soroc-soroc* and *colo-colo.* The former I have not been able to identify; but the latter is a condition of atrophy of the male genital organs due to early marriage and excessive sexualism common in hot countries.

Barcones divides his work into three parts, treating respectively of endemic, epidemic and sporadic diseases.

### ENDEMIC DISEASES.

*Those due to telluric infection.*—1. The most important in this class is the chronic diarrhea of hot climates. It is not dysentery nor bilious, mucous or choleriform diarrhea. It is a specific disease probably due to a specific germ and characterized by frequent stools without tenesmus, not bloody, but thin, profuse and grayish or whitish-yellow in color. The points of differential diagnosis are: absence of fever, no tenesmus, profuseness of stools, and obstinacy to treatment. The patients are or become anemic, the tongue becomes aphthous and ulcerated, hemorrhagic maculæ form in the mucosa, grit-like shreds of epithelium are found in the stools, which become more frequent and profuse, pustules form in the skin, which is sensitive to cold, the extremities become paralyzed, the liver atrophies, the intellect is numb and complete marasmus closes the scene. 2. Acute suppurative hepatitis is also frequent and seems to be due to a specific infection.

*Those due to paludal infection.*—1. Malaria, the dominant forms being double quotidian and double tertian. All races are subject to this, and new arrivals are particularly amenable. It prevails throughout the entire archipelago, but is worse on Balabac, Basilan and the subarchipelago of Sulu. 2. Continuous fevers, which may be benign, grave or pernicious. The first has no cold stage, but a burning skin and intense headache, perhaps also bilious vomiting and jaundice. It runs three to ten days and generally leaves gastric trouble as a sequela. The grave form is two-fold: one, resembling severe typhoid, but with intermissions of fever, lasting six to seven days and terminating by a crisis; the other, with a similar range of fever, but with bilious vomiting, icterus, mucous ecchymosis and cerebral derangement. The pernicious fever may be comatose, apoplectic, deliriant, epileptiform, syncopal, algid or choleriform. It occurs chiefly in Basilan, Balabac and Joló. All these types of pernicious fever have similar characteristics in onset, season, fever, condition of abdominal viscera and malarial protozoa in the blood. A low temperature, especially in the young, is serious. 3. Larvate paludism —neuralgia, urticaria, etc.—occurs in anemic women and yields to quinin. 4. Paludal cachexia, general among the natives and characterized by anemia, pale or muddy skin and mucosa, small and slow pulse, cardiac weakness and soufflé, and diminution of red blood-corpuscles, besides enlarged liver and spleen. The points for differential diagnosis of malarial infection are splenic enlargement, protozoa in the blood, and action of quinin. Barcones says that, in the Philippines, all pernicious fevers should be suspected to be malarial and the patient should be saturated with quinin as quickly as possible. 5. Manila fever. A special type of pernicious fever occurs in Manila during the hot months of April and May, and sometimes becomes epidemic. Dr. Barcones found it nowhere else, and he was not able to learn from other doctors of its occurrence elsewhere. He thinks it is malarial in character, but other physicians class it as distinctly specific. Malaria is a disease of hot and moist months, while this occurs in the hot and dry season. The onset is insidious, without initial chill and with but slight symptoms, perhaps a little vertigo or anorexia. There is hardly any lassitude, the pulse range is normal—60 to 90—respiration easy, no thirst, no increase of spleen or liver, tongue moist and clean, urine limpid; in fact, the victim feels almost as well as usual. *But the thermometer shows a rising temperature,* and when it reaches the point of danger, say 42 C., a rush of symptoms overwhelms the patient. The prognosis is so grave that a physician, if he can be called in time, must not delay about theories. He faces a condition and a dying man, not a theory. If the patient is robust, then blood-letting is indicated; if not, baths, quinin, alcohol, bromids, caffein, anything and everything, in the practically hopeless battle. It would seem advisable to try infusion of normal salt solution with or without the blood-letting.

*Microbe infection.*—1. Typhoid is very frequent, especially among the dense population of Manila. The prognosis is always grave, on account of the debilitating conditions of life. 2. Dysentery is always endemic and sometimes epidemic, contagion being through the stools. It is due to a microbe which produces ulcers in the large bowel. The stools may be as numerous as one hundred in twenty-four hours; they are often bloody and mucous, and always attended by tenesmus and severe griping. There is intense thirst, goose-flesh, variable pulse and excruciating pain, followed by adynamia, somnolence, coldness and death about the twentieth day. This must not be confounded with the chronic diarrhea of hot climates that afflicts foreigners who are addicted to alcohol and high living. It follows slight, acute attacks often repeated, and is characterized by serous stools, absence of tenesmus, a feeling of weight in the rectum, absence of fever and of anorexia, and is followed by gradual weakness and wasting. 3. Beri-beri is ascribed by MacLean to scurvy, but Barcones considers it of microbic origin. The name is derived from a Singhalese word meaning weakness, and the Tagalos call it *Mausas.* It is found in both hemispheres between latitudes 45 degrees N. and 35 S., and during both the wet and dry seasons, but more frequently in the former. It occurs chiefly among rice-eating people, and by some authors is ascribed to damaged rice. The mortality varies in different years and localities from 10 to 70 per cent. It runs a rapid course and is characterized by serous anasarca without albuminuria, but with torpidity and weakness of the lower limbs. The blood is altered as in anemia or scurvy. Three forms are found, the marasmic, dropsical, and polysarcic. The first is marked by a rapid invasion of symptoms, viz., difficulty of locomotion, diffused anesthesia, atrophy of skin and muscles, periodic attacks of palpitation and depressed circulation. The anesthesia and atrophy gradually extend to the trunk, and general paralysis slowly causes death. The dropsical form is the usual one in the Philippines. Its course is more rapid because of effusion into the pericardium and pleura. The polysarcic form is marked, in addition, by an extreme obesity and a terrible aspect of the countenance. All the forms have fever. Sometimes the disease proves abortive, but convalescence is slow and relapses are frequent. The patient remains anorexic and has a peculiar strutting walk like a rooster. Often it is acute and fulminant, the rush of symptoms being overwhelming and de[illegible] [illegible]ing [illegible]m twenty-four to forty-eight hours. [illegible] [illegible]osis the irregularities of h[illegible] albuminuria, local anesthesia, the mode of walking and alternating edemas of the extremities. 4. Erysipelas is frequent among the natives, and in spite of their dark skin is easily recognized.

*Bradytrophic arthritism.*—1. Acute articular rheumatism is frequent, especially on the coasts. Like typhoid and pneumonia, it diminishes after the typhoons. The chronic form is also common, especially in females. 2. Gout, both acute and chronic, is found among foreigners and well-to-do natives who indulge excessively in eating and drinking, and lead idle, sedentary lives. 3. Obesity is prevalent among natives and Europeans, both sexes and children, and is due to the food being largely farinaceous and sweet, and to the inactive life imposed by the climate. 4. Phagedenic ulcers are numerous and are called *llagas de Cristo*—wounds of Christ—by the natives. The tissues around the sore are atonic and anesthetic, and undergo progressive molecular destruction. They resist healing measures and not infrequently require amputation. A specific microbe is probable, but has not yet been discovered. Concurring causes are the abundance of insects which cause lesions, the excessive perspiration which causes maceration, and the racial anemia and weakness of constitution.

*Dyscrasias.*—1. Anemia is the most wide-spread pathologic condition in the country. It not only accompanies all diseases, and attends convalescence, but it is often primary. Primary anemia is not a malarial cachexia, because not attended by enlarged spleen or protozoa. It seems to be, like the febrile attacks and the diarrheas, a part of the process of acclimatization, and hence its special victims are foreigners. Barcones thinks that the climate—heat and moisture—by diminishing the respiratory field, impairs hematosis, debilitates the digestive functions and disturbs nutrition. 2. Leukemia is frequent among those who suffer from the prevalent forms of dermatosis and furunculosis. It is also a transitory symptom in all the microbic diseases, including tuberculosis and the native dysentery. The white blood-corpuscles increase in number, and the adenoid tissue proliferates even in organs normally possessing little or none, so that lymph adenomata are formed in the liver, kidneys and serous surfaces. 3. Diabetes is rather rare, but does occur. 4. Rachitis is very common among the natives and the offspring of foreigners. Barcones says: "All the native races are excessively rachitic. It seems as if nature, which is otherwise so exuberant in its manifestations, had attempted in this land to belittle the human race by making men little, weak and rachitic both physically and morally."

### EPIDEMIC DISEASES.

1. As to cholera, the pandemics of 1819 and 1865 involved the Philippine archipelago with the rest of the world, but it escaped the epidemics of 1830, 1848, and 1854. In 1882, cholera destroyed 25 per cent. of the population of Zamboanga in one month, and decimated that of Manila. It seems that it has not been extirpated since, for cases occur every hot season, and in 1884 and 1889 there were frequent outbreaks. 2. Smallpox exists the same as elsewhere, and the hemorrhagic or black pox is the most frequent. Vaccination is largely practiced by the natives, but immunity is lost by the failure of the adults to be re-vaccinated. 3. Varicella is common, sometimes assuming a pemphigoid form. It is trifling in children, but may be serious in adults. Travelers, who speak of seeing children with smallpox, in their mothers' arms, on the street-cars in Manila very likely saw cases of varicella. 4. Scarlatina, measles and roseola occur. 5. Diphtheria is abundant in all the islands, often malignant, and sometimes epidemic in the dense city populations. 6. La grippe invaded the Philippines in 1889-90, in its tour around the world, and reappeared in several following years. Barcones saw many cases in the hospital of Joló in January and February, 1894. Convalescence was shorter and more complete here than in Europe. 7. Dengue, being native in Indo-China, easily passes over to the archipelago. It occurs usually at the change of the monsoons. 8. As to scurvy, Barcones had not a few cases among sailors who had been on long voyages. An outbreak occurred in the Spanish army on Mindanao in 1890. It is frequently found among the native boating population and in the prisons.

### SPORADIC DISEASES.

*Skin diseases.*—1. Lichen tropicus, rosy papules becoming vesicles and attended by severe pruritis, besets the newly arrived, and is probably due to hyperidrosis. 2. Acarus itch occurs not only among the poor and unclean, but also among the better classes. Among the Moros, it is so severe that the skin becomes even corrugated. 3. Phthiriasis or morbus pedicularis is very prevalent. 4. Sycosis is found often among foreigners, but the natives, having little or no beard, do not suffer from it. 5. Pellagra has been common among the agricultural population since the introduction of maize. 6. Herpes occurs frequently and in great variety. 7. Leprosy exists, especially in Mindanao, Paragua and Joló. Barcones studied it in the Leper Hospital at Manila, where he met the true tuberculous form. 8. Elephantiasis was found in the Leper Hospital.

*Diseases of the intestinal tract.*—1. Stomatitis, muguet, etc., are plentiful among the natives and are due to lack of attention to the mouth, to the abuse of tobacco, and to the constant chewing of bullo—a mixture of betel leaves, bonga fruit and lime. Bordier, in his "Geographie Medicale," claims that bullo is an astringent and intestinal disinfectant and a preventive of tropical diarrheas. 2. All forms of gastritis and intestinal inflammations occur with extreme frequency and are difficult to treat because the milk-supply is inadequate and poor in quality. 3. Dysentery is always present, either sporadic, endemic or epidemic. 4. Acute congestions of the liver are very common and are the chief cause of mortality among foreigners. 5. Cholelithiasis is frequent, especially among women and the sedentary classes. 6. All forms of intestinal parasites are found, due largely to the use of water from sluggish streams. This class of ailments is produced by sedentary life, abuse of the bath, overeating and indulgence in alcohol.

*Diseases of the respiratory system.*—1. Acute coryza occurs among foreigners, and is attributed by Barcones to the practice of removing the hat in the shade after exposure to the sun's rays, in order to wipe off the copious perspiration. 2. Ozena was found only among the Chinese and was ascribed to the fact that their wide and presenting nares are easily accessible to infecting germs. 3. Epistaxis occurs often among the soldiers after exposure to the sun. It is also an accompaniment of liver diseases, eruptive fevers, malaria and anemia. 4. Catarrhal anginas are common, especially among the women, who are wont to wear but scant covering on the neck and upper thorax. 5. Laryngitis in all forms is produced by the excessive use of tobacco. The tuberculous form is as prevalent as in Europe, and is largely found among the young women who work in the tobacco factories. 6. Acute bronchitis is frequent during the rainy months and at the change of the monsoons, but its duration is shorter than in the temperate zones. The chronic form afflicts almost all adults, both native and acclimatized. It is due to tobacco and alcohol, and to the rheumatic and arthritic diatheses. 7. Asthma is common. 8. In spite of the comparatively even temperature, pneumonia occurs as freely as elsewhere, not only in the cold season, but also in the hot months. 9. Phthisis pulmonum is as prevalent in the Philippines as in any country of the globe. Acute miliary tuberculosis occurs with unusual frequency among the young, and especially among the newly-arrived soldiers. 10. Acute pleurisy was found very often.

*Diseases of the circulatory system.*—Barcones met all forms: endocarditis, myocarditis, functional hypertrophy, etc., the last-named being caused by the abuse of liquor, tobacco, tea and coffee. He saw no aneurysm. Exophthalmic goiter is found chiefly in the negro tribes, and especially among the dysmenorrheic and hysterical women.

*Diseases of urinary and genital apparatus.*—Acute and chronic nephritis occur as elsewhere. Renal lithiasis is not rare in Manila, and Barcones attributes it to the character of the drinking water. Cystitis is frequent and is due to the abuse of the bath. Gonorrhea and syphilis are wide-spread, the latter being generally violent in character and attended by a rapid march of the stages. Affections of the testicle and scrotum are the same as elsewhere, except that the natives generally suffer from atrophy of the testicle and even of the penis, due to early use and subsequent abuse of the sexual relation. This condition they call *colo-colo.* The women are usually anemic and chlorotic. The genital functions develop early, and the duties of marriage are assumed before puberty is well established, and before the organs are ready for the task of maternity. The menses are more profuse and closer together than in colder climates. Women suffer all the ailments that their sisters elsewhere endure.

*Diseases of the nervous system.*—Among these, Barcones saw cerebral congestions, gummata, meningeal inflammations, myelitis, locomotor ataxia, progressive muscular atrophy, and infantile paralysis, but no case of paralysis agitans. Epilepsy is frequent among all the races. Hysteria occurs among the natives, both men and women, and sometimes spreads by imitation. They call it *nagalit,* which means "hot-head" or getting crazy. Chorea also sometimes spreads by imitation. He saw no case of tetanus, though he treated many wounds, especially of the feet, these being frequent, on account of the habit of going barefooted. All forms of neuralgia and facial and other kinds of paralysis are met as often here as in other regions. Gangrene of the extremities is peculiar to this country, especially among the Chinese and Moros, and in women who have repeated attacks of malaria. It is a local, symmetrical asphyxia.

### INTOXICATIONS.

Barcones is very severe in his condemnation of "the inhuman spirit of speculation," which introduced alcohol and opium to the natives. "The evil has borne its fruit and the inhabitants of these remote lands have adopted our vices, adding them to those possessed from time immemorial, and producing the physical and moral impoverishment of a race already of itself weak and miserable." He declares it is no exaggeration to say that the use of alcohol in hot countries is the constant promoter of almost all the diseases known in them. The clinician and the hygienist, as well as the moralist, must recognize it as the fount and origin of diseases, both acute and chronic, of tissue degeneration and cirrhosis, of insanity and of crime. The practice of drinking a "bracer" during the morning fast was copied by the natives from the Spaniards, and is now almost universal. The latter take their *aguardiente,* and the former their *tuba*—wine of coca. The custom is even more injurious than the use of alcohol at meals.

The opium intoxication was introduced by the Chinese, and is largely practiced by them. Their dens were licensed by the Spanish government.

Tobacco intoxication or nicotinism, which is a frightful abuse found among the Filipino men and women, is the cause of laryngeal, bronchial and gastric troubles.

This summary of Philippine diseases is the authoritative report of a practical, scientific man, and it enables us to correct the errors of other writers. For example, the "Dictionnaire Encyclopediaque"—which has an excellent article on the Philippines—says that primary hepatitis is rare, that typhoid fever is exceptional, that dengue does not occur, and that tetanus is quite common. Davidson says that pneumonia, pleurisy, influenza and pertussis are rare, and that he nowhere finds mention of scarlet fever. On the other hand, I find, in Barcones, no mention of sunstroke. Stevens, a layman, who spent two years in Manila, says that it is uncommon. Nor does Barcones mention the bubonic plague, which has appeared since his book was written, and which quite recently—according to press reports—has gained a foothold in Luzon. Cavada speaks of the prevalence of buboes and of their being hereditary in families, but he no doubt refers to the enlarged glands of scrofulosis, and not to a rapid, infectious and fatal disease.

Since the bubonic plague must now be included in the nosology of the Philippines, the following statement, excerpted from Manson, is in place. Its bacillus has been identified by Kitasato, and rats and other vermin are recognized as its usual carriers. The incubation period is usually from two to eight, rarely to fifteen days, but in malignant forms it may be only a few hours. The prodromata are depression, anorexia, aching, chilliness, giddiness and sometimes a dull pain in the groins. The onset is rather sudden, with fever, great lassitude, headache, aching and drowsiness. The face is drawn and haggard and the eyes bloodshot. Sometimes after one or two days of invasion, and sometimes suddenly, the temperature rises rapidly, followed by its cortege of symptoms—thirst, weakness, delirium, subsultus, coma, and convulsions. The spleen and liver are enlarged. The urine is scant, and rarely shows more than a trace of albumin. The pulse becomes weak, dicrotic and intermittent. In most cases, usually in twenty-four hours, the characteristic bubo forms in one or both groins, sometimes in the axilla or cervical angle and is occasionally multiple. The buboes go on to suppuration and heal indolently. Convalescence is generally slow. Death usually takes place between the third and fifth day, and the mortality varies with the degree of virulence of the epidemic, from 20 to 95 per cent.

It may be useful to add a word about the time of the year at which the various disorders occur. Foreman says that many deaths take place in the spring from acute indigestion, caused by eating the new rice too plentifully. Stevens says that the cold season is the most healthful, and that the hot, dry months in the lull between the monsoons are the most unhealthful. Cavada states that smallpox occurs in the early months of the year, cholera and gastric disturbances during the southwest, and malaria and catarrhal fevers during the northeast, monsoon. Generally speaking, morbidity is greatest at the changes of the seasons, and mortality highest in the cold season and at the onset of the rains. Barcones notes that rheumatism, malaria, pneumonia and typhoid diminish after the occurrence of hurricanes, because these storms either destroy or sweep away the germs. Acute gastric fevers and dengue develop at the change of the monsoons. Pneumonia and beri-beri occur in both the wet and dry seasons, but are more frequent in the former. Pernicious fevers and cholera occur in the hot months.

Finally, the important question of treatment remains to be considered. Among the natives, especially in the interior, there are numerous *curanderos.* These men do not constitute a class or caste like the medicine-men of savage tribes, but they are somewhat akin to the barber-surgeons of villages in Continental Europe in which doctors are not located. They use the native plants in all manners; infusions, decoctions, embrocations, powders, etc. In general, we may say of their treatment what can not be said of some of our pharmacopeial drugs, that if it does no good it probably does no harm. As an example, for neuralgias they use *tangan-tangan,* a ricinus plant. Not long since I read a commendation of the castor-oil treatment for obstinate neuralgias, and I have several times since used it with excellent results. The curanderos who suck the bites inflicted by venomous reptiles are called *chanas,* and their antidotes *panaod.* Barcones says that their results are often marvelous. The natives also have a custom of applying ligatures around the limbs in beri-beri, in order to prevent the edema from ascending to the trunk. Another singular custom of their women is that of kneading and massaging the abdomen of pregnant women during the two weeks preceding the expected delivery. They say it makes parturition easier and places the child in a better presentation.

Treatment, as practiced by educated Filipino and Spanish physicians is precisely the same as with us. But Barcones emphasizes the necessity of always adding tonic treatment in order to counteract the debilitating influences of the climate. They also realize that the best treatment is prophylactic, and that prophylaxis must be public as well as private. As a matter of historic justice it should be recognized that, whatever the political failings of Spain may have been, she should not be charged with neglect of the sanitary and hygienic needs of the Filipino people. This was natural, since medicine exercises a witchery over the minds of its devotees and compels study, investigation and work. The Spaniards could not have been alone obtuse to her charms. We Americans are not familiar with Spanish writings. We know those of the English, the Germans, the French and to some extent the Italians, but it may readily be admitted that Spanish medicine occupies the same high level as that of the other nations.

The archipelago was controlled, as to sanitary matters, by a department of charity and health, which included bureaus of maritime hygiene, baths, medicine and pharmacy, vaccination and hospitals. Manila was divided into fifteen districts, each in charge of a physician and under control of a superior sanitary committee and a central bureau of vaccination.

According to Trübner's "Jahrbuch der Universitäten der Welt" (1898-99), the University of Manila had 404 medical and 51 pharmacal students out of a total of 1144, and for many years, if not for generations, it must have sent forth a supply of physicians. Its teaching staff was complete, and in the list of its professors, I note the name of Dr. Manuel Rogel, professor of hygiene, who is known by his work on "Lepra en Visaya." There must have been some medical journals published in the islands, for I find reference to the *Boletin de Cebu* and the *Cronica de Ciencios Med. de Filipinas.*

Barcones gives a list of ten hospitals and ten infirmaries scattered through the islands, some of which were civil and some military and naval. The most notable are those of St. John of God, in Manila, in charge of the Sisters of Charity; St. Joseph's Asylum for the Insane, located on an island in the Pasig River, and the Leper Hospital of St. Lazarus, in charge of the Franciscan Friars. The origin of the last-named hospital is noteworthy (I quote the story from Foreman): In 1633, the ruler of Japan, being hostile to Spain and resisting the missionaries' attempts to Christianize his people, sent to Manila a shipload of lepers—about 150 in number—with a message that he did not permit Christians in his country, but knowing that the priests professed charity for the afflicted, he committed these unfortunates to their care. Instead of adopting a modern "shot-gun" quarantine, the monks accepted the gift and built for the lepers a shelter which has grown to be the richly endowed leper hospital of Manila.

Vaccination was early introduced into her colonies by Spain. In 1803, five years after the procedure was made known, though the country was involved in the turmoil of the Napoleonic wars, she sent an expedition to vaccinate her subjects in all her colonies—a task that occupied three years. There stands in Manila a statue to Charles IV, which bears the inscription "In Gratitude for the Introduction of Vaccination into the Philippine Islands." Jenner himself did not get a statue till 1858, or sixty years after his discovery was announced, and thirty-five years after his death. Since that date the practice of vaccination is widespread in the archipelago, and the Dict. Encycloped. says that the natives are favorably disposed to it. At any rate, according to Cavada, in almost every village there was a public officer styled vaccinator, who was usually not a physician.

Quarantine was enforced as occasion arose. A frequent complaint in Stevens' book is that the mails and shipments were delayed by quarantine. However, the quarantine of 1200 islands, with a tariff inviting smuggling, is not an easy task.

So much for public prophylaxis, which, though essential, should not render unnecessary the far easier individual prophylaxis. The essence of this latter may be expressed in that fine German motto: *Nur mässig*—be moderate! Moderation is the substance of the following advice given by Barcones, Hoess and other physicians who have lived and practiced in the tropics.

*Food.*—In hot climates digestion is slower and all secretions, except the sudorific, are less than in the temperate zones, hence the visitor to the tropics should leave behind him his former habits of eating and should accustom his digestive tract to the foods of the country, which are largely pleasant fruits. He is tempted to overindulge or to eat as freely as in his former environment, and as a result he is liable to acquire dilatation of the stomach, gastric catarrh, etc. These fruits ripen quickly and decay soon, hence the danger of diarrheas and other infections. They are acid, and hyperacidity is an obstacle to the absorption of lime and other salts needed by the system.

*Exercise.*—The heat inclines one to avoid exercise, but the latter is necessary to prevent the system from becoming enervated and the nutrition from being impaired. On the other hand, overexercise in a hot climate is injurious, and he will be a fortunate man who can wisely strike the happy mean.

*Baths.*—The heat likewise tempts one to overindulge in cold baths, that lead to frequent congestions of the stomach and bowels and afterward to a chronic condition. Baths for cleanliness are necessary; and brief ones, that are not too cold, may be moderately used for cooling the body.

*Drinks.*—Alcohol—whisky, beer, wine, etc.—is surely poison in the tropics if not elsewhere. I have already given Dr. Barcones' judgment on the subject. Dr. Hoess says: "Nothing is more foolish than the notion of the laity that alcohol is the best preventive of malaria." He bases his judgment on his personal experience. Coffee, tea, milk and water, which Nature provides in those climates, are the drinks which Nature meant man to use.

*Sterilization.*—Since germs multiply rapidly in hot, moist climates in every organic tissue, all articles of food and drink should be sterilized before being taken into the body, and this is best done by cooking. Fresh fruit with its rind not removed is sterile, but if it has been peeled or has stood long, it may easily become a nest of germs. Finally, Barcones gives the homely advice, to wear flannel belts, not to stay in the fields after sundown and not to sleep on the earth or in low dwellings with the windows open.

Here, if anywhere, the Americans should follow "plain living and high thinking," as well for their own sake as for that of the people toward whom we have now assumed responsibilities. Some foolish Padre—quoted by Worcester—said: "The Filipinos are big children who must be treated as little children." It would be unwise to accept a *bon-mot* as a philosophic aphorism or a political rule. The father who constantly threatens and beats his child to make it be "good" brutalizes both himself and his child, and since in the name of humanity we fought Spain, let us take care lest by being selfish and unjust we invite Nemesis and become as inconsiderate and cruel as the Spaniard is alleged to have been. It will require deep study, much self-control, great unselfishness and prayer to keep us as a nation pure-minded and honorable. In this spirit I submit this paper as my contribution in the work of learning the needs, and relieving the necessities of our new-found, dark-skinned brothers.

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# NEURASTHENIA: SOME POINTS IN ITS PATHOLOGY AND TREATMENT.*

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The comparatively sudden recognition, through the work of Dr. Beard, about a quarter of a century ago, of the morbid state since known as neurasthenia, forms one of the curious chapters in the history of medicine. While there is ample proof and ample *a priori* grounds for believing that there has been a tremendous increase of the condition in recent times, it is also equally certain that it is older than the history of medicine. We find the familiar syndrome of insomnia, nervous anxiety, disturbance of vision, ringing in the ears, vertigo, and difficult breathing described by Hippocrates.[1] Passing over the intervening centuries, and simply noting a few suggestive titles in literature, we find one of Robert Whytt's, in the middle of the eighteenth century—"Observations on the Nature, Causes and Cure of those Disorders which have been Commonly Called Nervous, Hypochondriac, or Hysteric; to which are Prefixed some Remarks on the Sympathy of the Nerves." This was honored by a translation into French. Coming down to the present century, the "Erethism Nerveux" of Depau, 1819; the Neuropathie or Vapours of Doujens, 1824; the "Nevrose Proteiforme" of Cerse, 1841; and the "Cachexie Nevrose, Etate Nerveux," by Sandras, 1859; sufficiently indicate by their titles the confused recognition of the condition we are considering.

The complete pathology of neurasthenia can only be written when we fully understand the histochemistry and histology of fatigue, which are simply the chemical and structural changes incident to normal function everywhere, morbidly intensified and prolonged. I need scarcely call to mind how distant is the realization of this ideal; and yet we have sufficient information along these lines to form a substantial basis for the construction of a somewhat crude pathology, in accordance with obvious and legitimate analogies, which may serve as a useful working hypothesis to be tested and modified by further observation and study.

First in importance is the structural alterations in the ganglionic cells under the influence of overaction or fatigue, and the credit for our knowledge of this belongs to American medicine in the person of Dr. Hodge, whose investigations have been followed by similar work all over the scientific world, culminating in the recent tentative volumes by Barker and Van Huchten. The detailed discussion of these changes would lead me too far and I must content myself by pointing out that it has been satisfactorily proved that there are definite structural alterations of the neuron, as a result of fatigue, which can be positively demonstrated under the microscope by the proper technique. The most constant phenomena observed by different investigators are shrinkage or disappearance from the cell body of certain granular masses variously known as Nissl bodies or tigroid masses, the precise nature, function and significance of which still remain in doubt. Whatever views may be entertained with reference to the validity and importance of the neuron as an anatomic and physiologic unit, they can have no bearing on the authenticity of these observations, and their significance is of equal importance, compared with either the older or the newer conceptions of nerve structure.

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*Read before the Chicago C [illegible] rch 29, 1900.

[1] Mathieu, A.: Epuisement [illegible] 1.

In close juxtaposition to these observations come those of Nissl, Goldscheider, Dana, Lugaro, and others, on the effect of various inorganic and organic toxins on the structure of the cell body in the way of cell atrophy, morbid pigmentation, destruction of tigroid masses, etc.; these, while possibly, but not certainly, varying with the kind of toxin used, bear a general resemblance in character to those produced by excessive fatigue.

It is true that the loss and subsequent return of function do not precisely correspond with these demonstrable alterations within the ganglionic cells; but it can hardly be doubted that such alterations, though simply an exaggeration of those occurring in normal function, must have an important bearing on the functional integrity and resistance of the nerve-cell as a unit, and of the nervous system of which it forms a part. It appears quite probable, as suggested by Barker, that the loss of function is really in correspondence with minuter structural alterations, which our present means of research are not capable of recognizing.

If it be true that many toxins experimentally introduced into the circulation produce such important modifications in the ganglionic cells of the nervous system, then it is a legitimate inference that some of the toxins generated within the organism may have a similar influence. Indeed it is not altogether an inference, because in the acute and chronic infections there has already been demonstrated the association of analogous changes in the nervous system. With reference to the acute infections, it has heretofore been held by most observers that they were the result of the high temperatures incident to different morbid processes. Recent investigations have shown that these alterations in the ganglionic cells do not occur in high temperatures experimentally produced, unless the latter reach 104 F. or more; strongly indicating that in most cases the cell alterations, which are found with much lower temperature, are the result of poisons formed within the organism either in the strict and narrow sense, or in the gastrointestinal tract. Some observations made within the last year, my recollection of which is distinct but the reference to which is lost, have shown similar alterations in the anterior horns of the spinal cord from a number of children who died from acute intestinal disease which can be fairly attributed, and as I remember the cases, attributed only to intoxication from intestinal toxins.

Admitting the importance of these autochthonous poisons, we have to consider the accumulation of the chemical products of molecular changes within the cell structure always and everywhere resulting from cell activity, commonly known as function. For obvious reasons, these chemical products and the phenomena of their retention and removal are best understood with reference to the muscle-cell where they are composed of inorganic compounds—mostly combinations of phosphoric and carbonic acid, the potassium salts of which in excess are certainly toxic—together with many others, organic in character, such as crusocreatinin, pseudoxanthin and other leucomains, as well as inosit and other non-nitrogenous extractives, all of which play an important, if not the principal rôle in the complex phenomena of muscle fatigue. The existence of these or analogous chemical products as a result of the functional activity of the ganglionic cells is an incontestable corollary of physiologic law; and it is more than probable that the condition of the ganglionic cell in the state of fatigue is such as to seriously impair those molecular changes by means of which it excretes, if I may so express it, its own toxic debris, and assimilates in exchange its nutrient supply from the pabulum which surrounds it. We have thus, viewing the cell as a unit, what may be justly regarded as a primary autointoxication in the strictest sense of the word. Going a step further, we may confidently affirm that under conditions of general fatigue the mechanism of elimination of poisons or their disposal by oxidation or other chemical processes is more or less seriously impaired. Chief among the factors which tend toward the retention within the organism of harmful products, is a lowered cardiovascular tension which not only impairs kidney function but removes from the local mechanism of tissues that normal *vis a tergo* on which the proper motion of the circulating fluids depends; and, finally, the same conditions of fatigue with impaired motility and secretion acting on gastrointestinal function leads to more or less imperfect elaboration of food products and, indirectly, to excessive germ action, more especially in the intestinal tract, although frequently in the stomach also, with the necessary production and absorption of bacterial toxins which still further overburden the already weakened defensive and eliminative machinery of the body.

From these and many other considerations of a like character it would appear that the symptom-complex known as neurasthenia, is due to, or at least associated with, disturbances of the most diverse character and wide-spread distribution; and that the numerous attempts to sharply define the condition—such, for instance, as Huchard's conception of it as an arthritic neurosis—and Glenard's overestimation of the importance of enteroptosis—as well as the vasomotor theory so strongly emphasized by Savill—are based on an imperfect and narrow conception of its complex and diverse pathology. These changes probably involve the minute structure and chemistry of the neuron as the principal, but not necessarily the primary, factor. Certain conditions are so strongly predisposing in their character as to be justly classed with the causes, properly so-called. In this connection various clinicians, among whom I may mention A. Matthieu, speak of secondary neurasthenia in organic disease, such, for instance, as tuberculosis and heart disease, in which toxemia and malnutrition are conspicuous. Such disturbances are peculiarly liable to occur in connection with gastrointestinal disease. Some two or three years ago I published an article on what I then termed the neurasthenic symptoms of gastrointestinal disease. Subsequent study of a large number of cases in private practice, with a somewhat extensive review of the literature on the subject, has forced on me the conclusion that those presenting the symptoms referred to—really the symptoms of neurasthenia—should have been called neurasthenia of gastrointestinal origin, though I do not asume this to be true of all cases of neurasthenia with associated gastrointestinal disturbances. The opinion of Charcot, that the gastric symptoms were *always* the result of the neurasthenia, is undoubtedly true of a large contingent of cases, but his assertions have been altogether too sweeping. Savill, who was a pupil of Charcot, and translator of his works, says that he has searched his writings in vain to find adequate reasons for his opinion on this question, and declares that Charcot, contrary to his usual custom, has made assertions without sufficient proof. I have carefully examined his clinical lectures (Lecons du mardi) and can fully substantiate Savill in regard to this point.

It appears to me, in the first place, that the facts already cited in this paper furnish abundant *a priori grounds for supporting the plausibility of the possible* gastrointestinal origin of neurasthenia. That profound disturbance of the digestive organs can exist for any great length of time without producing alterations more or less deep-seated in the central nervous system, is a proposition against which is arrayed a vast accumulation of physiologic and clinical facts. Enough has been said concerning the histologic and chemical aspects of the question; the clinical data will next engage our attention.

The clinical histories furnished by patients are frequently, it is well known, unreliable in many of their details. And whether the neurasthenic symptoms of indigestion, were precedent in point of time in any given case, may often be a matter of doubt. In some cases, however, the gastric symptoms are so conspicuous for so long a period of time before the distinct development of the neurasthenic symptoms, as to leave no doubt as to the order of development. Take for instance a case like the following: Mr. H., a merchant, aged 45, consulted me two years ago on account of a severe indigestion of about two years' duration. There was no free HCl with extreme atony of the stomach, considerable food being found in the morning, fifteen hours after the last meal, together with a large quantity of mucous secretion of a thick tenacious character, which was heavily laden with germs of diverse kinds. The case proved a very intractable one, but I persevered for months and was finally rewarded by a compensatory hypertrophy and a return of HCl secretion nearly up to the normal standard. This took about one year; and for several months of this period there was not a single symptom which could properly be classed as neurasthenic. During all this time, however, and especially during the very early period of treatment, there were found in the urine unmistakable evidences of a profound toxemia, which was, as the sequel showed, gradually producing alterations in the central nervous system, and so furnishing the groundwork, if not the very essence of the neurasthenic state which unexpectedly developed at a time when stomach function had vastly improved but was still sufficiently impaired to directly and indirectly produce and keep up severe autointoxication. The clinical picture of neurasthenia was somewhat suddenly, and without any adequate cause, added to the case; the result, as I fully believe, of the alterations produced in the central nervous system in the manner already indicated. Here was a case under constant study and observation in which the order of events was unmistakable. I have picked out at least twenty-five or thirty from my notes, of patients in whom the evolution of symptoms, while not personally observed, appeared unmistakably the same as in this one.

There is another method of studying this question—one which is more reliable than the clinical histories related by patients. I refer to the clinical study of the variations in the symptomatology of cases put to the therapeutic test. This brings up another question, or rather a modification of the one under discussion, as to the importance of gastrointestinal disease in the aggravation and perpetuation of neurasthenic symptoms in cases in which the neurasthenia is clearly the primary condition. For if it is true that primary gastrointestinal disease can cause neurasthenia, it follows, as a necessary corollary, that gastrointestinal disease, even when secondary to the neurasthenia, will act as an auxiliary etiologic factor. For this very reason the sequence of events in the evolution of any given case is a matter of subordinate importance from a clinical point of view, although always of the highest scientific interest. The real practical question is whether or not the gastrointestinal disease is capable of exerting a prejudicial effect on the progress of the case.

In studying the question from this point of view, my methods have been as follows: Cases presenting gastrointestinal disease, irrespective of its priority, were subjected, so far as possible, to the most thorough clinical investigation of all secretions and excretions. The fasting stomach was uniformly examined and any contents obtained subjected to suitable chemical and microscopic study. The Ewald test-breakfast was administered and examined in the conventional time and method. The urine was carefully analyzed, twenty-four hour specimens always being procured, with a complete estimation of urea, uric acid, chlorids, phosphates and sulphates, the latter of which were either differentiated into fixed and ethereal sulphates or careful approximate estimates made of indican, phenol, and associated compounds. The feces and colon washings were constantly submitted to microscopic and recently to spectroscopic research, with a view of determining the evidence of excessive bacterial, protozoal, or other parasitic organisms which might prove a possible source of autointoxication as well as of abnormal coloring matter. The conditions thus ascertained were carefully connoted with the symptoms presented, and variations in each were studied with the view of noting correspondences or differences. It would be impossible at this time to do more than give the briefest sort of general statement, and I will simply say that on thorough disinfection of the stomach and large intestine I have seen the most remarkable and immediate amelioration of symptoms in many cases, and in some many times, where the syndrome was that of a typical neurasthenia. This has occurred so often under my own observation that it amounts, in my mind, to absolute proof of the etiologic relation of gastrointestinal disease to the condition known as neurasthenia. It appears perfectly clear that if these conditions can immediately and unmistakably intensify the symptoms of neurasthenia with equally immediate amelioration on their correction, then the possibility of such conditions acting as a primary cause is settled beyond a doubt.

The difficulty in determining whether the neurasthenia or the gastrointestinal disease was the primary condition in any individual, is often very great and frequently insurmountable, but from a practical point of view it does not appear to be important. If the gastrointestinal disease is purely neurasthenic in its inception, it soon becomes much more than this in a large number of cases, and requires much the same line of treatment whether it is primary or secondary.

In this connection, I desire to emphasize one fact to which I have repeatedly called attention, viz., the occasional latency of gastrointestinal disease. I have seen many cases and published reports of some of them, in which these conditions were entirely unsuspected, and yet were, as the sequel showed, the undoubted cause of more or less nervous disturbances. So that, even in the absence of conspicuous stomach symptoms, the possibility of latent disease should always be kept in mind. This general fact has been very forcibly stated by that acute observer, Dr. Beard, who said: "Indigestion, however complicated, or by whatsoever causes produced, may affect every part of the body except the stomach, and in ways beyond computation; . . . and very frequently patients chase up one symptom after another until they get wearied, without either finding relief, or suspecting the true seat of disorder."[2]

One of the most important problems in the study of neurasthenic patients is that connected with the phenomena of tissue metabolism. I can not enter into a detailed discussion, but I wish to call attention to a group of cases in which the chemical processes of the body seem to fully share in, if not to bear the brunt of, the neurasthenic state. They are clinically represented by the phenomena of a more or less marked hypoazoturia. From my notes I have selected 40 cases, which are of sufficient importance to form a special group and be studied by themselves; in these the daily output of urea averaged less than 10 grams. The average is rather too high to adequately express the conditions, because of the inclusion of a few cases in which the urea was as high as 19 grams, that really should have been left out. The lowest quantity found was 2 grams in 1 case and 3.25 in another; 10 had 5 or 6 grams; and the remainder ranged from 6 to 19. The uric acid was estimated in 25 of these 40 cases, and was found to average .75 gram, or about the normal quantity; its ratio being high, about 1 to 13, because of the absolutely small quantity of urea. It might be thought that in at least some of these cases these conditions would be the result of renal insufficiency, but there was, in the first place, a complete absence of all signs of organic disease; and, in the second, the quantity of urea rapidly increased under suitable treatment. In 1 case, for instance, the record shows that during the first ten days of treatment three analyses were made—2.63, 8.58 and 9.84 grams. The treatment in this case consisted of a modified rest cure, the patient remaining in bed until 11 a.m.; a very little gastric lavage, with hot and cold douches over the entire body; and static electricity. The largest quantity of uric acid found in this series of cases was 1.77 grams, or about 25 grains; the smallest .32 grams, or about 5 grains. In regard to the uric acid excreted generally in neurasthenia, while I have not yet found time to study the notes of a larger series of cases with a normal or excessive excretion of urea, an excess does not appear to be directly connected with the neurasthenic state, but every now and then occurs in very large amounts, apparently as the result of some particular perversion of metabolism, the exact nature of which is at present obscure; and, I have found the same occasional excess quite as frequently in groups of cases of chronic nutritional disease, other than neurasthenia, e. g., diabetes mellitus. I use a modification of the Hopkins method in which I have the fullest confidence, as I have many times verified it with standardized solutions of uric acid.

In this same series of 40 cases the gastric juice was examined in 24 with the following results: In 6 there was no free hydrochloric acid; in 10 there was subacidity varying from 5 to 25 degrees; in 6 it was strictly within the normal range, from 30 to 50 degrees; while in 2 it was in excess, in one 65, the other 70. In all of these cases, including the 6 in which the hydrochloric acid was normal, there were more or less distinct signs of gastric disturbance, and the microscopic examinations of the fasting stomachs invariably showed pathologic debris.

The discussion of the treatment of neurasthenia must be greatly abbreviated owing to the details already entered into with regard to other questions. Rest must form the essential and rational basis of any and all lines of treatment, and everything else must be subservient. It should be, in practically all cases, of a modified type, rarely absolute, but this must be determined by the individuality of every case; the object being to secure a proper combination of rest and open air exercise, with massage in cases in which the strength does not permit of adequate exercise.

Hydrotherapeutics has served me well. The precise form and vigor of the hydriatic procedure must be regulated entirely by the clinical picture presented, and by the *undetermined factor of reaction*, which can only be learned by experimental observation. A hot douche or spray of the entire body, from 110 to 120 F., according to the reaction on the part of the patient, followed immediately by a cold douche at from 90 degrees in delicate patients, in the beginning of a course of treatment, down to 50 or less, has given me best results. Ordinarily this procedure is to be applied every other day. There are others more or less severe, the availability of which can only be determined by a careful study of the particular case in hand with reference to the processes of nutrition and secretion, and constructive and destructive metabolism, which are thus modified in a manner and to a degree which nothing else, so far as I know, can accomplish.

Electric treatment is also of great value. Static electricity, in so far as its effect on the general organism is concerned, appears to head the list. For the treatment of local neurasthenic symptoms, such as morbid cephalic sensations, rachialgia, extreme intestinal atony, neurasthenic weakness of the sexual organs, etc., faradism and galvanism properly combined or alternated have served me best.

I come now to what appears to be a matter of supreme importance, viz., the treatment of local morbid conditions of special organs. In this connection the gastrointestinal tract unmistakably ranks first, for many and obvious reasons, and this statement will hardly be disputed by those who have found, as I have, along with Blocq[3] and many others, that gastric symptoms are rarely absent in neurasthenia.

The one difference of opinion is likely to be in reference to the proper methods applicable to the individual case. My own conclusion is that gastric disease in the neurasthenic patient requires, with slight modifications, precisely the same treatment that it does under other circumstances. If it is the judgment of the physician that such diseases are best diagnosed and treated by empirical instead of exact methods, relying on drugs and regulation of diet, then that is the best thing here; but if he believes that it is incumbent on him to positively know, instead of vaguely guess at, the pathology of any given case, then here as elsewhere he will in the majority of cases, proceed first to make a full diagnosis according to the most approved methods. The logical sequence of such a diagnosis can only be the formulation and adoption of such a method of treatment as appears best adapted to meet the conditions thus determined. In most cases there will be found defective digestive secretion, atony, excessive mucous secretion and, in many, or perhaps most cases, a local expression of that irritable weakness which forms so salient and conspicuous a feature of the general clinical picture. Proper regulation of diet, thorough mastication of food, ample supply of fluid for the purposes of tissue metabolism, preferably taken an hour or more before meals, together with a general line of treatment suitable to the neurasthenia, will frequently be all that is necessary to dispose of the stomach symptoms in the milder grades of cases. The exhibition of bromids in neurasthenic dyspepsia, while lauded by many authorities, has for the most part proved disappointing in my hands; and as a general proposition it is true that in the gastric disease of neurasthenia, as in other cases of gastric disease, drug treatment is for the most part futile and frequently sinister in its effects.

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[2] Beard: Nervous Exhaustion, 1894, p. 126.

[3] Blocq, Paul: Neurasthenia (Translation of critical digest), Brain, 1891, p. 315.

It appears that in the severer grades of stomach disease, it matters not whether the case is one of neurasthenia, diabetes, or something else, there is but one rational method, and that the direct one, with such modifications and additions as the case may require.

The irritable weakness to which I have already referred will occasionally produce a morbid reaction on the part of the patient, which will make either the propriety of the continuance of this line of treatment a matter of doubt or its discontinuance imperative. I have found this true in several cases; those, too, in which the treatment was clearly and unmistakably indicated. I remember one of a young physician who was apparently born neurasthenic, but the gastric symptoms were the most conspicuous and troublesome features in the case. The fasting stomach contained about two ounces of pathologic fluids and food debris, and yet every attempt at direct intragastric medication produced such a reaction on the part of the patient as to make his condition distinctly worse. I know of no way to positively determine whether or not such methods are available except by the test of experience. In many of the cases apparently unfavorable from this point of view, local stomach treatment has been borne without undue reaction, and with conspicuous benefit. Many a time I have seen insomnia and the various forms of cephalic and abdominal distress disappear in a few days after the institution of intragastric treatment, and this after other methods had been followed for weeks in the vain hope of saving the patient the unpleasant ordeal of such treatment.

Cases like the one referred to are in my experience exceedingly rare, but a few such would explain the sweeping condemnation of Charcot in regard to local gastric medication in neurasthenia. He said that he had seen bad results from its use. What physician, experienced in such methods, has not? We can no more reckon with the idiosyncrasies of the stomach in neurasthenia with reference to local treatment, than we can with the same sort of idiosyncracies in syphilis with reference to the iodids, or in anemia with reference to iron. But we will not condemn the iodids in the one instance, nor the iron in the other, because of an occasional intolerance; nor is it any more rational to condemn intragastric methods in neurasthenia because of similar exceptional results.

I will refer to only one other question in the treatment of the digestive organs, viz., the management of the colon. As the result of the gastrointestinal indigestion and atony, we have a local infection of the colon with accumulations of mucus, epithelium, food debris, etc., which act on the nervous system by reflex irritation, and furnish indefinite quantities of bacterial toxins for absorption. These add to the autointoxication and render more arduous the struggle of the organism in the processes of elimination. Inasmuch as it is a very simple matter to clear this material out of the colon by suitable local treatment, this should be done in all cases in which a proper examination shows that it is indicated. The patients can not do this satisfactorily; either the physician or a trained assistant should personally attend to it, and see that these accumulations are removed. More than this, by using extremes of temperature for the irrigating fluid, atony of the intestinal wall can be directly counteracted; and, in fact, the entire nervovascular mechanism of the splanchnic area stimulated and modified in a favorable manner, which has an important bearing on all the principal functions of the abdominal and thoracic viscera.

I do not wish to be understood as advocating the use of the stomach-tube in every case of neurasthenia, although as my experience widens, the tendency is to use it in a larger and still larger number of cases. I have no doubt that many patients with mild, and some with severe, stomach symptoms, will do very well without it, but an honest study of somewhat extensive clinical data, has forced me to a more aggressive line of treatment in this direction; and in many cases in which I thought it would be illy borne or not tolerated at all, everything has gone smoothly and the most signal benefit has accrued.

I need hardly say, in conclusion, that my intention has not been to formulate a definite pathology, for this can only be done with post-mortem data which are not yet available, and probably will not be for some time. I believe, however, that a good working hypothesis, based on well-known analogous facts, which come very close in this instance to removing it from the domain of hypothesis to that of respectable theory, is infinitely better than pathologic nihilism. It gives us a tangible conception which can be tested by experience and study; and if it should not prove to be the whole truth, as it probably is not, it will at least help to lead us in that direction.

## DISCUSSION.

DR. EDWARD F. WELLS—I am not prepared to discuss this paper *in extensio*, but some of the observations mentioned impress me with peculiar force, inasmuch as my attention has long been directed to a class of women mostly from 40 to 50, or more, years of age, in whom careful observation, for months and years, has shown the excretion of urea to be constantly materially reduced. Women of average size, and taking an average amount of exercise, have been passing only from 150 to 200 or 250 grains of urea a day, and the long time which these patients have been watched renders the observation quite significant in this connection. My cases have not been accompanied by albuminuria, and casts have not been found in the urine except accidentally. I always have endeavored, by every means at my command, to increase the excretion of urea in these patients; I have tried exercise, massage, diet, forced feeding, rest, etc., and I have absolutely been unable to make any material change in the amount of urea excreted in those cases that would continue for any length of time. Often, following the therapeutic measures adopted, an increased output of urea would be noted and I can easily understand how, if one saw cases of this kind, and judged their condition as reactive capabilities for a short time, the apparent improvement might have been the result of treatment, and that it would be permanent, but I will venture the assertion that if these patients are closely watched for six months or a year afterward it will be found that their condition will be found much the same as before the treatment was begun. My patients of this class have been uniformly nervous; however, I would scarcely consider any of them as being strongly neurasthenic, but they have been always ailing, constantly chasing symptoms, seldom very sick, or if overtaken by a serious illness they were rather sure to recover.

When I first began to study these I looked on them with much aprehension. I feared the condition was the beginning of Bright's disease and that the failure to detect casts, etc., might be due to fortuitous circumstances, but I now feel reassured that this condition is not incompatible with long life.

One of my patients is now 55 years of age, and has been under observation for nine years, and the condition still continues.

I would ask the essayist, in closing the discussion, to give the means that he makes use of in order to increase the excretion of urea in these cases, or in any in which the amount of urea is constantly low.

Dr. Jos. M. Patton—I am inclined to agree with Dr. McCaskey in his estimation of the importance of gastro-intestinal conditions. I have always looked on the derangement of the gastro-intestinal tract as probably a principal, primary factor in the production of nervous conditions. Nearly all of these patients give a history of disturbance of the stomach and intestinal indigestion, and subsequently the production of a chain of nervous symptoms which would indicate autointoxication. I hardly think we are warranted in going as far as Bouchard has done in enunciating his views with reference to autointoxication, but we often find disturbed action of the heart and of respiration, abnormalities in the peripheral sensations, inequalities in the peripheral circulation which appear to be so directly connected with intestinal conditions where the digestive functions have been at fault, that it seems difficult to escape the conviction, judging from a clinical standpoint, that this is the most important factor in the production of the subsequent train of nervous symptoms. We may make a mistake in doing so, but the clinician can hardly escape that ground. It seems forced on him, both from the sequence of events and the results which he gets from treatment directed toward the gastro-intestinal tract. I can corroborate the belief of the essayist in the efficiency of such treatment, though I have not followed it as thoroughly as he has indicated. As far as I have gone the relief has been proportionate to the efficiency of the means employed.

Dr. Frank S. Churchill—I am not so much interested in the cases of neurasthenia themselves as I am in finding out, if possible, what are the conditions which have gradually led to this affection. In other words, I have been much interested in studying the children of neurasthenics and in finding out, if possible, the tendencies in those children—when they reach adult life—to acquire this disease. We rarely, if ever, see neurasthenia in children. If I have seen it, I have not recognized it. A study of the various nervous conditions in children may result in much good in preventing the subsequent development of neurasthenia in later life. Our work should not only embrace a very careful study of the family history, but we should endeavor to find out what abnormalities have occurred in different members of the family, especially in the father and mother, in the grandparents, in the uncles and aunts. By so doing we shall find out the tendencies with which the child starts in life. A careful study of the children of neurasthenics, inquiring into hereditary tendencies, the family history, careful attention to the physical, mental and nervous development of children, will do much toward the prevention of the development of neurasthenia or neurasthenic symptoms later in life.

Dr. G. W. McCaskey, closing the discussion—With reference to the question asked by Dr. Wells, as to the best means of increasing the amount of urea excreted, forced feeding is the most important point; next to it out-door exercise. Other measures are the use of hydrotherapeutics which can influence metabolism to a remarkable degree, electricity, massage, etc. In every one of the patients treated by me the urea excretion has increased during the progress of treatment; although they nearly all of them have stopped it with only a relative or symptomatic cure before reaching the physiologic standard. The inherent weakness of the nervous system, which constitutes the essential basis of the neurasthenic state, has its influence directly or indirectly on tissue metabolism, and it is this which has to do largely with the lowered excretion of urea. Whatever will strengthen the nervous system; whatever will improve cardiovascular tension; whatever will quicken the chemical processes of the body, taken in connection with forced feeding in these cases—these are the measures which will give the best results. Yet there may be cases in which this tendency will return and persist and will perhaps be one of the most important neurasthenic features. I see no reason why the neurasthenic picture itself may not be accentuated in this way with defective tissue metabolism expressed clinically by an insufficient urea excretion. Whatever will improve tissue metabolism in other ways will improve this condition, if an adequate amount of food can be taken, with suitable improvement of the digestive organs.

In regard to the importance of autointoxication, while Bouchard's views may have been a little extreme, the more I have studied these cases and this question, the more important in my estimation, autointoxication becomes. It seems to me that almost every morbid process is necessarily associated with what might be called a sort of autointoxication. If any cell in the body becomes impaired in functional activity, that cell is relatively unable to dispose of the injurious elements resulting from the molecular changes within itself, and these accumulations constitute a veritable intracellular autointoxication—the fundamental and primary expressions of this morbid phenomenon.

The point made by the last speaker with reference to a study of these conditions in children is an important one. It opens up the question as to whether in many instances, instead of an inherent weakness of the nervous system, we have not an acquired weakness of the nervous system, which is due to bad training in childhood, to improper feeding, unhygienic surroundings, and various prejudicial influences which tend to weaken the nervous system.

With reference to the possibility of neurasthenia developing in children, so far as I recall, the youngest case on record is that of a girl, 12 years of age. In nearly all the cause has not been what it usually is in the adult, viz., worry and mental strain, but merely shock. Charcot says that neurasthenia hardly ever develops in people under 16 or 18 years of age.

# REPORT ON MASSAGE.

BY DOUGLAS GRAHAM, M.D.

BOSTON.

When we come across good things in medical literature it should be our duty and pleasure to pass them along to those who have not easy access to the same. Hence the need of occasional reports. That distinguished old mirror of the profession in England, *The Lancet*, has been rather slow in waking up to the merits of massage, yet what it has had to say of late on this subject is of so much importance that we can afford to let French and German literature rest for a time while we briefly report what our English cousins have been doing in this line.

In 1884 your reporter wrote that no more fertile field awaits the investigations of physiologists than that of ascertaining the similarities and differences existing between exercise and massage.[1] Partly in fulfillment of this prophecy we present the following:

## THE EFFECTS OF BATHS, MASSAGE AND EXERCISE ON THE BLOOD-PRESSURE.

In *The Lancet* for June 10, 1899, Drs. Edgecombe and Bain have given a detailed account of their experiments to determine the effects of baths, massage and exercise on the blood-pressure. For arterial pressure the radial artery was taken, the subjects being in the recumbent posture, with the arms extended in a line with the heart. For venous pressure the veins in the back of the hand were taken in some, in others those of the forearm. Ten subjects were experimented on, and the results were confirmed by repeated observation.

*Cold.*—The effect of the cold bath was to raise the arterial and to lower the venous pressure. When to cold, percussion was added in the form of a strong needle douche applied simultaneously to the surface of the whole body, the arterial pressure became raised to a greater extent than with cold alone.

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[1] A Practical Treatise on Massage, 1884.

*Heat.*—The effect of warm baths of plain water, on the other hand, was to reduce the arterial pressure to an extent roughly *proportionate* to the increase of temperature. The fall in venous pressure was in greater proportion than the fall in arterial.

*Heat and cold alternately.*—In the alternating needle-bath or Scotch-douche, where the temperature is made to rapidly oscillate between warm and cold, the net result was a rise in arterial with a slight fall in venous pressure.

*Massage.*—Observations led Drs. Edgecombe and Bain to the conclusion that general dry massage, in the form of *pétrissage*, while it may cause an initial rise of blood-pressure of brief duration, produced as the net result a fall in arterial pressure both mean and maximum, provided the abdomen was not *masséed* too vigorously. Deep massage and compression of the abdomen caused an immediate rise in blood-pressure by dispersion of blood accumulated in the splanchnic veins into the systemic circulation. The venous pressure was observed to be always relatively, and in some cases actually, raised; the amount of rise appearing to depend to some extent on the temperature of the room, being greater in a warm atmosphere. This confirms the experiments of Drs. Brunton and Tunnicliff on cats, made some years previously, that massage of a considerable muscular area caused first a rise in the general blood-pressure, which was followed by a fall, in some instances as much as one-fifth of the original pressure.

*Wet massage* in the form of the Aix douche, in which massage is administered under a warm douche conveyed by a flexible pipe playing between the hands of the masseur, causes an increased effect—temperature added to massage. Here was observed a greater fall in arterial pressure than was obtained with dry massage, and coincidently an actual rise of venous pressure.

On the other hand, wet massage in the form of the Vichy douche, in which massage is administered under a warm needle spray, the patient being in the recumbent posture, causes a rise in all pressures, maximum, mean, arterial and venous. The difference between this bath and the preceding is due: 1, to the percussion of the needle-spray tending to raise the pressure, and 2, to the fact that the patient being in the recumbent posture abdominal massage is more efficiently performed and hence a rise in pressure results. Vigorous abdominal massage would seem to abolish the fall produced by massage of the limbs and the rest of the body, and when this was but slightly performed, the net result was a fall. The influence of warm temperature plus massage was to considerably augment this fall. In all probability the factor primarily and chiefly disturbed by massage is the peripheral resistance rather than the output of the heart, and the result is to be attributed mainly to diminished resistance from arteriolar dilatation.

*Exercise.*—The effect of exercise on the blood-pressure depends on the severity of the exercise. In all forms an initial rise in arterial pressure occurs; if the exercise be mild there is a fall during its continuance; if severe, the rise is maintained; after exercise, moderate or severe, a fall takes place. The venous pressure is raised during all forms of exercise and remains raised during the subsequent arterial fall. The return to normal after exercise takes place more or less rapidly according to the gentleness or severity of the exercise and the temperature of the atmosphere.

### MECHANOTHERAPY OF MOVABLE KIDNEY.

In *The Lancet* of Jan. 29, 1898, Dr. A. Symons Eccles gave an interesting report of the treatment of movable kidney by means of mechanotherapy. Since 1892, 21 cases of floating kidney attended with local pain and tenderness have come under his observation and treatment. Of the 21 patients, 5 were greatly improved by abdominal massage, exercises and the application of a pad and belt, and 1 of these has been free from all discomfort for five years, another for two, whereas both had before suffered from pain and general disturbance at intervals for prolonged periods. Sixteen have been treated by "the rest cure" for periods ranging from fourteen days to eight weeks, and of these 7 were lost sight of within four months after treatment; 1 was a complete failure, and 8 he has recorded in detail, having selected them as typical of the varying conditions under which, in males and females, movable kidney may give rise to very marked suffering, often without any knowledge on the part of the patient that nephroptosis existed or could cause the gastric, hepatic and nervous symptoms of which they complained. The results obtained in these 21 are for the most part so satisfactory that they bear favorable comparison with records of those treated by operation, and in view of certain cases which have occurred there is something left in favor of employing milder means for the relief of nephroptosis than surgical interference involving either nephrorrhaphy or nephrectomy. Early diagnosis, reposition and the maintenance of the organ in its normal place by methods which also conduce to the improvement of general health would appear to go far toward the relief of the patient from the necessity of having the kidney stitched into its place or removed from the body, as the advocates of early operation advise.

At any rate, sufferers from freely movable kidney should first be subjected to treatment by rest and massage followed by exercises devised for improving the muscularity of the abdominal walls before they are exposed to the risks which exist, however small they may be rendered by the skill of the operator. No harm arises from the delay which may be fairly entailed by the "rest cure, and if any local surgery should afterward prove to be necessary because of failure to relieve pain by the means here advocated, the sufferers will be rather better than worse able to undergo the operation. Especially does this appear to be the case when it is remembered that the best results obtained after operation can be secured only if we should keep the patient lying in bed for at least six weeks, no matter whether the wound has healed by first intention or not.

In these cases of floating kidney, no less than in other forms of enteroptosis with so-called functional disorders of digestion, the indications are to restore healthy tone and to induce the redeposition of fat and flesh to the abdominal walls, as well as to improve the nutrition of the viscera and replace the packing material of fat, which in many cases has vanished. This in most instances can be done by judicious combination of frequent massage of the abdomen and loins, carefully regulated diet, and finally gradually increased exercise, precautionary measures meanwhile being adopted by posture, rest, and mechanical support to prevent and counteract the tendency to displacement and undue mobility engendered by lack of proper support for the viscera.

### MASSAGE IN RECENT FRACTURES.

The use of massage in the treatment of recent fractures finds an earnest advocate in Dr. Wm. H. Bennett,[2] of St. George's Hospital, London, who has had practical experience of its benefits in a number of cases. This method has not received the general attention in England which it deserves, owing to the traditional belief in the necessity for complete rest and immobility. Massage in ordinary cases of fracture can be used without producing any movement between the ends of the bones worth mentioning, but the question is very appropriately raised whether slight movement between the fragments is not conducive to union rather than the reverse, in view of the fact that in many cases of fractures in which the union is slow, consolidation rapidly takes place when some mobility between the ends of the bones is brought about by the use of the limb or by pasisve motion.

The stiffness and pain which follow in many of these cases is often erroneously attributed to adhesions in or about the joint, but Dr. Bennett believes that this is practically always due to matting of the soft issues about the line of fracture, and the opportunity of dissecting a case forcibly confirms this belief. It was one of fracture of both bones of the leg three inches above the ankle, two months previously. The fractured parts were firmly united and the position of the fragments fairly good. No movement beyond a little springing of the ankle-joint could be produced by force sufficient to break down joints." The ankle-joint was healthy and the stiffness was entirely due to the state of the soft parts about the fracture. The anterior tibial muscle at the point of junction with its tendon was firmly adherent to the bone; the muscular structures at the posterior aspect of the fracture had apparently been slightly torn and were with their tendons intimately adherent to the bone by cicatricial tissue, in which the posterior tibial nerve was involved and could be liberated only by careful dissection; the nerve showed no signs of having been damaged at the time of the accident. All movements of the ankle-joint beyond that allowed by the mere elasticity of the parts appeared to be checked by the adhesion of the tissues mentioned. When the adherent structures had been loosened by dissection, the ankle-joint could be freely bent and moved with comparative ease. The implication of the posterior tibial nerve affords an explanation of the acute nerve pain caused by attempts at movement of the ankle-joint in walking after some cases of fracture of the lower part of the leg. In the treatment of cases of recent fracture, by massage, this matting of the soft parts is impossible; the tendons are prevented from becoming adherent, the muscles do not waste, the joints are kept supple and nerves can not become implicated in adhesions.

Nothing tries the endurance of the patient and the resources of the surgeon more than the distressing muscular spasm which so often occurs in the early stages of cases of fracture, and which in spite of anesthetics and minor operations—tenotomy, etc.—is in some instances practically uncontrollable until it wears itself out in the course of some days. Massage is a means by which this spasm may be frequently, if not always, controlled in a way which is remarkable to those who have not seen the effects of it. In illustration of this he mentions the case of an old woman with a comminuted fracture of the right femur. The thigh was tense, swollen and discolored, and every few minutes she shrieked with pain as the spasms occurred. At the end of ten minutes' massage, the spasms were less, and in fifteen minutes had ceased entirely, and the patient fell into a sound sleep. After this she begged for the massage, as it stopped the spasms, which soon disappeared not to return and allowed the limb to be manipulated freely. Another case is mentioned of fracture of both bones of the leg, in which there was very acute muscular spasm that was speedily allayed by massage, and then the fracture could be kept in place; before the massage this was impossible. The soothing effects of the local massage seem to be the rule in these cases, and patients otherwise constantly restless fall asleep while it is being given. The effect on the bony union seems to be to hasten the process of consolidation. The massage should be continued until the union has fairly consolidated, which varies in different cases. In a simple uncomplicated fracture of both bones of the leg a month is the approximate time. It is especially adapted for patients getting along in years, in whom circulation and nutrition are poor. The use of passive motion by which the soft parts are prevented from becoming adherent may appear objectionable, since in many cases the parts must be more or less torn. Early movement might seem likely to produce weakness, but in practice no defect of this nature appears to be brought about when ordinary care is observed. If some weakness should arise, it would be far less detrimental than the crippling which ensues on matting of the torn structures.

The difficulties connected with the application of this treatment are: 1. The large amount of time required of the practitioner in the earlier stages, during which the treatment must be carried out under his immediate supervision unless a particularly skilled person is available. 2. The difficulty of finding in all places a person capable of safely undertaking the manipulations in the later stages, which would absorb more time than busy practitioners could afford, besides other minor difficulties not worth mentioning, such as expense, etc.

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## REPORT OF CASE OF SPLENECTOMY, WITH ATTEMPTED SURGICAL CURE OF ASCITES DUE TO CIRRHOSIS OF THE LIVER.*

BY T. N. RAFFERTY, M.D.
ROBINSON, ILL.

Mrs. T., an American and a widow, 31 years of age, consulted me on Aug. 6, 1899, with the following history: She began life, and has mostly lived, in a malarious district; and from the age of 8 to 17 she had chills frequently—none since. Her family history was good and no history of syphilis. She began menstruating at 16; it has been painless and regular. She was married at the age of 22, one year afterward had a miscarriage, supposed to be the result of a fall, and was in bed for three weeks, with fever; she was delirious part of the time. Her menses were irregular from that time, and ceased entirely four years ago, the patient then being 27 years of age. About six years ago she began to have dull pains in the left hypochondrium, but gave little attention to them until two or three years later, when her physician told her that she had a tumor in the left side of the abdomen; he was not certain of its nature.

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[2] Lancet, Feb. 5, 1898, p. 359.

*Read before the Esculapian Medical Society at Paris, Ill., Oct. 26, 1899.

Two years after this she began to have abdominal dropsy.

When seen she was fairly well nourished, her skin and conjunctivæ slightly jaundiced. Her abdomen, at the umbilicus, measured fifty inches in circumference; from the ensiform cartilage to the umbilicus, fifteen inches, and from the latter to the symphysis pubis, six inches. On account of ascites no tumor could be made out with certainty. Liver dulness was increased. Examination of the urine showed a few hyaline casts, but no albumin. The specific gravity was 1.018. Examination of the blood, made some days later, showed an excess of leucocytes, but no blood count was made. There were no glandular enlargements.

On the next day her abdomen was tapped by Dr. H. N. Rafferty, and three gallons of fluid withdrawn, leaving, as we supposed, some two gallons. A large solid tumor could then be felt, filling the left half of the abdomen, and extending down into the pelvis. The hand could be pressed down behind the upper end of the tumor, but not below the lower end. The arrest of menstruation, the ascites, and the absence of cachexia presented a typical picture, as given by Kelly, of ovarian fibromata. Everything else, as well as the shape of the tumor, pointed to an enormously hypertrophied spleen. Five days later an exploratory incision was made in the median line below the umbilicus, two or three gallons of fluid were evacuated, and the abdominal cavity thoroughly explored. The tumor proved to be the spleen with numerous adhesions. The omentum was thick and large, and contained many veins as large as a lead pencil. The right lobe of the liver was found to be enlarged, covered in many places with hard nodules, and with many adhesions to the diaphragm; the left lobe was atrophied. The peritoneum and intestines were apparently healthy, the uterus and ovaries very much atrophied.

After this thorough exploration the wound was closed, and the patient's recovery from the operation was uninterrupted. The ascites, however, returned so rapidly that on the fifteenth day after the operation tapping had to be resorted to and three gallons of fluid were removed. The woman was now clamoring to have the offending spleen removed, notwithstanding the fact that I told her such an operation would not be considered a justifiable one by most surgeons; that it would almost certainly prove fatal, and even if it did not, she would still have a fatal cirrhosis of the liver left. She said she would get well, and insisted on the operation. Just at this time my attention was called to the advisability of attempting a surgical cure of ascites, due to cirrhosis of the liver, by an "operation directed to the establishment of an adequate collateral circulation for the omental and peritoneal vessels."[1] I at once determined to remove my patient's spleen, and if she did not die at once from hemorrhage or shock, to try what could be done in establishing an anastomotic circulation between the omentum and parietal peritoneum. The surroundings were about as unfavorable as could be for an operation of this magnitude, the operating-room being the living-room of the patient and her sister. On September 1, twenty days after the exploratory incision, assisted by Drs. C. H. Voorheis, of Hutsonville, Ill., O. G. Taylor, of Palestine, Ill., and James Miles, of Merom, Ind., I made an incision seven or eight inches long in the left semilunaris, beginning an inch above the level of the umbilicus and extending upward, curving the upper two inches of the incision to the left. With some difficulty the spleen was delivered. Most of the adhesions were easily broken. The pedicle, however, was enormous, being 1/2 by 3 inches, a mass of mesentery and large blood-vessels, held together by dense connective tissue. Six or eight heavy silk ligatures were used in tying it off in sections, then another around all. The pedicle was now cut through, and the mouths of two or three of the larger vessels were caught and tied separately. There was no hemorrhage whatever from the stump, and it was dropped back into the abdomen, without any sponging or unnecessary manipulations, for it was very noticeable that any dragging or twisting of the pedicle produced immediate unfavorable effects on both the pulse and respiration, and several hypodermics of strychnia and whisky were necessary. As soon as the pedicle was dropped, the abdomen was flooded with hot normal salt solution, and sponged with clean gauze sponges. Attention was then given to Talma's operation for the cure of the ascites. There being already extensive adhesions between the right lobe of the liver and the diaphragm, no sponging or scratching of their surfaces was done. The peritoneal covering of the anterior abdominal wall was somewhat roughly sponged with gauze and the omentum sutured to it in half a dozen places, with fine catgut. The wound was now closed in the usual way, and the patient was put to bed in fairly good condition, having had a rectal injection of one quart of hot normal salt solution, while still under the influence of the anesthetic, as suggested by Howard Kelly, to prevent the inordinate and distressing thirst which follows intra-abdominal operations.

The anesthetic used was chloroform; the time of operation, one hour and thirty minutes. The temperature was 98, pulse 120. When seen by Dr. Miles, eight hours later, the temperature was 97.5, the pulse 160 and almost imperceptible. The Doctor gave 1/20 gr. strychnia hypodermically. At noon next day the pulse was 120, temperature 100.8, with no pain or vomiting, but some nausea, and she wanted water. I gave calomel and soda to move the bowels. The patient had been able to void her urine without trouble. The next day the temperature was 99.4, the pulse 115, and the bowels had acted freely, the patient was cheerful and had no pain. During the next two days the pulse and temperature were 100, on the sixth, seventh, and eighth pulse 96, temperature 99.6; on the ninth and tenth, pulse 96, temperature 99; on the eleventh day the pulse was 90, temperature 99. The stitches were removed and the wound was perfectly healed, so I made no arrangements to return.

The patient was then cheerful, with a fair appetite, and slept well. She was still jaundiced, but there had been no reaccumulation of ascitic fluid. She was seen the next two days, the twelfth and thirteenth, by Dr. Miles, and he thought her doing well. On the morning of the thirteenth the pulse was 96, temperature 98.4 and on the morning of the fourteenth day her pulse was 100, temperature normal. At 3 p. m. of that day she was suddenly seized with symptoms of pulmonary embolism and died at 10 p. m. No post-mortem was made.

The spleeen, when drained of blood, weighed 4½ pounds, and was eleven inches long, six wide and 3½ inches thick.

Removing the organ in this case was probably not a justifiable operation, although the precise indications for splenectomy have not been definitely settled. In this instance, however, it was the deliberate choice of a woman who knew she had an incurable disease, and who made the choice after she fully understood the probable result. She simply preferred this manner of death to the other. The operative treatment and cure of one of the most troublesome symptoms of an incurable disease opens up a field in surgical procedure that is well worthy investigation and trial. The operation seems to have been suggested first by Talma, of Utrecht; the suggestion being that if the interrupted portal circulation could be surgically re-established the ascites would be relieved.

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[1] N. Y. Med. Record, Aug. 26, 1899.

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# LARYNGEAL PAPILLOMATA REQUIRING A SPECIAL INSTRUMENT.

BY SETH SCOTT BISHOP, B.S., M.D.
Professor of Diseases of the Nose, Throat, and Ear in the Illinois Medical College; Professor in the Post-Graduate School.
CHICAGO.

The following case presents a unique feature, in that it was impossible to remove all of the laryngeal growths with any instruments that were obtainable, but that no difficulty was found operating with the special instrument shown in the illustration.

The case was that of a harness manufacturer, 50 years old, who had been in his present business thirty-two years. In 1895 he had experienced some annoyance from hoarseness; in December, 1897 he had a "cold in his throat," resulting in a loss of voice for two days; in the following summer the hoarseness returned and grew worse until, in November, 1898, there was complete suppression of the voice. The aphonia remained until the last of the papillomata were removed in January of the present year. The patient had been under the care of Dr. J. L. Eger, of Delphos, Ohio, who recognized the character of the tumors and referred the case to me for their removal.

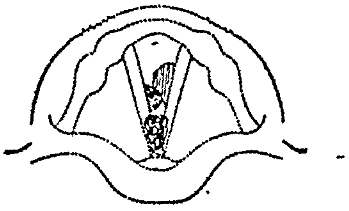

Fig. 1.—Laryngeal papillomata.

Examination disclosed the condition shown in Figure 1. The anterior commissure was filled by a pale pink, lobulated mass resembling certain adenoid growths in the vault of the pharynx. Adjoining this mass was a growth on the left vocal cord, situated a little nearer the anterior than the posterior end. Nearly opposite this was a similar, though larger, tumor having a broad base, and projecting from the border of the band to meet the opposite tumor in such a manner as to bring its anterior surface in contact with the posterior surface of its fellow. The pressure of these two papillomata against each other produced a marked depression in the right one.

These twin tumors presented the appearance of gray warts of a minutely cauliflower formation, and together with the third growth occasioned not only suppression of the voice, but obstruction to the column of air, although the respiration was not yet embarrassed sufficiently to cause great distress.

My first efforts were directed toward the removal of the mass filling the anterior commissure. I attacked it with Mackenzie's biting forceps and with the crushing forceps, but found that none of the usual instruments would reach them, then I bent an electrode in such a way as to afford a very long laryngeal extremity, and with this I destroyed the large mass.

However, the patient was averse to the use of the electrode, and conceived the idea of having an extralaryngeal operation, but fortunately was convinced that the results of endolaryngeal operations were far superior to those obtained from entering the larynx from without. By using the longest Mackenzie biting forceps obtainable I removed the mass shown at the actual size in Figure 2. The larynx was situated so low that it was necessary to press with extraordinary force on the forceps in order to reach low enough to obtain this much of the growths and it was impossible to reach more with the instruments then in use. Dr. O. J. Stein kindly made attempts with his and had the same results.

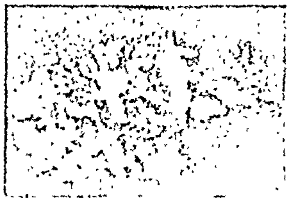

Fig. 2.

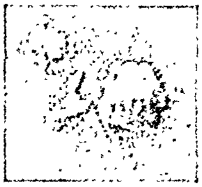

Fig. 3.

Then I had an especially long biting forceps made, with which I was able to remove the remnants of the two neoplasms. After the one on the right cord was taken away, there was revealed a growth below the cord, which was readily reached and removed by directing the long cutting blades of the forceps well under the band. Figure 3 shows the actual size of the growths that were taken entirely by the special instrument, Figure 4, which is three-quarters of an inch—18 millimeters—longer in the laryngeal extremity than the longest instrument I could find.

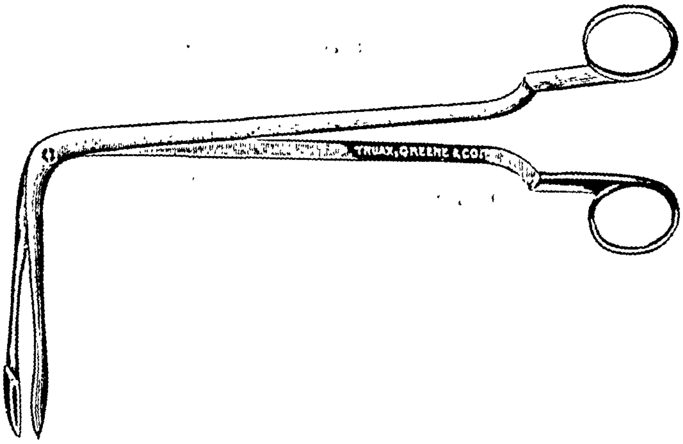

Fig. 4.—Special Laryngeal Forceps.

Since the operation the voice has gradually improved in strength and timbre, and under date of March 11, 1900, the patient reported as follows: "I am most delighted to inform you that my voice continues to improve; it is now almost normal, or as good as it ever was. I can halloo and, I believe, make a very fair stump speech," etc.

103 State Street.

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The Berlin authorities have instituted a three weeks' course in the Deaf and Dumb Asylum, for physicians engaged in work among the deaf and dumb.

# Therapeutics.

### Pneumonia.

Walton advises the avoidance of exposure to other cases, confining of the patient to bed, avoiding all unnecessary exertion of any kind, the use of white flannel clothing, one or more daily spongings with tepid water and vinegar, and a diet consisting of milk, soups, lemonade, etc. In a robust patient at an early stage the lancet will sometimes cut short the disease, and a brisk purge and one or two large doses of quinin may be of value. The drug he most depends on its Norwood's tincture of veratrum viride, 2 to 4 minims every two hours or oftener, watching its effect on the pulse and bringing it down to 70 or 80 and holding it there. He has never seen any untoward effects and if the treatment fails to arrest the disease it makes it milder and more easy to manage. If it goes into the second stage give ammonium carbonate, 5 gr., every two hours as a stimulant and absorbent. Strychnia is the best simulant and tonic we have and should be used freely when indicated. Digitalis is of service when the pulse is weak and rapid. Transfusion of normal salt solution should be used in bad cases and opiates to relieve pain if necessary.—*Va. Med. Semi-Monthly.*

### Intestinal Antisepsis by Chlorin Water.

Fitzgerald's treatment for typhoid fever is the one recommended by Yeo. The following is the formula for the preparation: Forty minims of strong hydrochloric acid is introduced into a 12-ounce bottle, containing 30 grains of potassium chlorate. The chlorin gas is at once liberated. The bottle should be tightly corked from the first. After it has become filled with the greenish-yellow gas, pure water is poured into the bottle little by little, shaking well after each addition, until the bottle is filled. To disguise the acridness of the chlorin, one ounce of syrup of orange-peel may be added, if desired. Of this mixture, one or two tablespoons may be given, in a little water, every two, three or four hours, according to indications. The odor of the chlorin is often detected in the breath and exhalation from the skin where the medicine has been properly given and it is desirable that it should be so. If necessary in any given case 24 to 36 gr. of quinin muriate may be added to the mixture, but usually it is hardly necessary. In some cases it may be well to give strychnin or digitalis, and for insomnia, codein will be of benefit. Fitzgerald has made this his standby to secure intestinal antisepsis, and he gives it night and day from the first until the temperature falls to normal and remains there. The bowels must first be freely moved by small, and often repeated, doses of calomel, followed by saline laxatives if necessary. He says give calomel—to prevent diarrhea if there be none, to cure it if it be present. Other methods of treatment are mentioned, but these are, he thinks, the most certain remedies.—*Medical Mirror.*

### Typhoid Fever.

The physiologic treatment of typhoid fever is summarized by Dabney as follows:

1. Clean intestines by mild carthartic. 2. Stimulate the vasomotors by the regular application of cold water with constant friction. 3. Colonic flushings. 4. Abundance of cool water to drink. 5. Clean sheets, clean gown daily. 6. Sunlight and air in abundance. 7. Spare and readily assimilable diet at long intervals. 8. Eternal vigilance for complications. 9. Careful study of pulse and temperature. 10. Never give any remedy that increases vasomotor paresis; the coal-tar series in particular are to be avoided. 11. Avoid the use of all stimulants as a routine practice. I refer especially to alcohol, strychnin, nitroglycerin, and ammonia. There are times when we may need stimulants badly, but the average cases, if properly treated, seldom need them. The use of digitalis, though indorsed by many good men, I deem unphysiologic, and at times positively dangerous in this disease.—*Va. Med. Semi-Monthly.*

### Berberin in Malarial Swelling of the Spleen.

Typaldo Lascarato (*Grèce médicale; Independence médicale*) says that berberin, in addition to its bitter tonic action, has the faculty of causing the elastic fibers of the spleen to contract, especially when that organ is enlarged, in a manner similar to that of ergotin on the muscular fibers of the uterus. This is not entirely free from danger as, if it is not administered with caution, its action may be so severe as to rupture the swollen spleen and cause fatal hemorrhage. But berberin, by rapidly and abruptly contracting the parenchyma of the spleen, drives from it *en masse* the paludal parasites which swarm in it, toward the general circulation, from which arises a fresh access of pyrexia. The administration has often been known to be followed by a brusque elevation of temperature. Many physicians have on this account considered berberin more harmful than useful. However, the author points out that this action of berberin in driving the parasites from the spleen, which is their place of election, into the general circulation is very favorable to the complete destruction and disappearance of the paludal miasm from the entire organism. The parasites expelled from the parenchyma of the spleen are spread through the general circulation at a very inopportune period of their evolution, when they engage in a deadly struggle with the phagocytes of the blood, to which they easily succumb. To aid this result, the Italian physicians, who have had considerable experience with this remedy, advise its use almost simultaneously with quinin, which attacks them more rapidly in the blood driven out by the berberin from the spleen. In all cases of swollen spleen, therefore, save those of too old standing or the ultimate result of advanced hypertrophy or degeneration of the organ, berberin is highly commended by the author. It is given in a daily quantity of from 1½ to 15 grains, according to the age of the patient, and always in combination with quinin. A favorite Italian prescription is as follows:

℞. Hydrochlorid of berberin................gr. xv
Bisulphate of quinin...................gr. viiss

M. Sig. To be divided into four powders and one taken every half hour or hour, for an adult.—*N. Y. Med. Jour.*

### Treatment of Migraine.

Dr. Henry Hanford, in an article on migraine and the vasomotor theory, speaks of the treatment as follows:

It is well known that when with headache the extremities are cold, some relief is obtained by warming the feet and hands at the fire. In many cases the recumbent position is required in addition. In a large class of patients the attack may be cut short by many hours by going to bed, applying hot bottles to the extremities, and taking a hot drink—as soon as the stomach will retain it—some hot tea or milk. A glow soon pervades the surface, and the spleen is relaxed. Relief so obtained is not very liable to relapse. After a few hours the ordinary duties of life may be resumed and, although sleep is the best completion of the cure, its place may sometimes be taken by a good dinner. I believe this treatment, when it can be carried out, to be far supperior to any drug treatment, although it may be aided by a good dose—thirty to sixty grains—of potassium bromid. It is a curious fact, and may be taken as the exception which proves the rule, that a few patients find that the recumbent position aggravates their pains and often prefer to spend the night in an armchair rather than go to bed. And also, in the last stages, moving about sometimes seems to hasten the end of the attack more than remaining quiescent.—*Edinburgh Med. Jour.*

### Neuralgia.

℞. Ammonii chloridi..........................℥iii
Tinct. gelsemii..............................ʒii
Ext. glycyrrhiz. liq.........................℥ss
Aquæ chloroformi, ad.........................℥vi

M. Sig. Dose ℥ss every four hours until the pain is relieved.

℞. Butyl-chloral hyd.........................ʒi
Ext. cocæ liq. (miscible)....................ʒvi
Glycerini ...................................ʒii
Tinct. aurantii..............................ʒii
Aquæ dest., q. s. ad.........................℥vi

M. Sig. Dose ℥ss every four hours.

℞. Antipyrin ................................ʒii
Tinct. cascarillæ
Tinct. card. comp.
Glycerini, āā................................℥ss
Aquæ ad......................................℥vi

M. Sig. Dose ℥ss every four hours.

#### TO RELIEVE NEURALGIA OF PHTHISICAL PATIENTS.

Capitan prescribes the following ointment. A very small quantity is lightly applied, and the part [illegible]d with some impermeable material [illegible] must be discontinued as soon as the skin becomes even slightly reddened:

℞. Guaiacol
Methyl salicylatis aa ..................gr. lxxx
Ext. belladonnæ......................gr. iiiss
Ext. opii ..............................gr. iv
Vaselini
Lanolini, āā.............................℥ss
M. Sig. External use.

In very acute cases, menthol (15 grains), antipyrin (30 to 40 grains), or potassium bromid (80 grains) may be added.—*Louisville Monthly Jour. of Med. and Surg.*

### Orchitis.

℞. Hydrargyri chlor. mitis.................gr. iii
Pulv. ipecac...............................gr. x
M. Sig. Take at once.
℞. Hydrargyri ammoniat.....................ʒi
Cerati simp..................................℥i
M. ft. ungt. Sig. Apply as directed. —*McElroy.*
℞. Ammon. muriatis...........................ʒii
Spir. vin. rect.
Aquæ, āā.....................................℥ii
M. Sig. Use as a lotion.
℞. Morphin sulphatis.....................gr. viii
Hydrarg. oleatis (10 per cent.)..............℥i

### Treatment of Congestion of the Liver.

Monin (*Indépendence Médicale*) gives the following formulæ:

1. ℞. Sod. bicarb.
Sod. sulph., āā.......................parts 6
Sod. phos.............................parts 4
Sod. benzoate.........................parts 2
M. Sig. A teaspoonful in half a glass of warm water, to be taken daily.

2. ℞. Powd. ignatia
Powd. squills, āā......................gr. 1½
Spartein sulph.
Amorph. quassia, āā.....................gr. ¾
Theobromin ............................gr. 3¾
M. Sig. Two such cachets to be taken daily.

3. ℞. Glycerin ..........................parts 200
Tinct. of boldo.......................parts 100
Lactic acid...........................parts 15
M. Sig. A teaspoonful in half a glass of water, to be taken after each meal.—*N. Y. Med. Jour.*

### Quinin Sulphate in Complete Abortion.

Schwab (*Rev. Med. Chir. des Mal. des Femmes*), points out that obstetricians are not agreed as to the best treatment of incomplete abortion, some leaving matters alone unless hemorrhage or sepsis appear, others proceeding at once to the clearing out of the uterus with finger or curette. He is of the opinion that, save in cases in which the medical men can keep the patient under constant supervision, in which antiseptic precautions have been carried out since the commencement of the abortion and in which the os is still closed, the uterus ought to be emptied at once. He admits, however, that the curette has its dangers, and that ergot is inconvenient, so he recommends quinin sulphate. He has used it with success in seven cases of incomplete abortion. It is quite safe; it does not set up a tetanic condition of the uterine muscle; it may be given in two doses of eight grains at an interval of ten minutes, and it usually causes emptying of the uterus in about four and a half hours.—*The Times Register.*

### Palatable Quinin Mixture for Children.

Dr. W. J. Greanelle gives the details for the preparation of such a mixture which will be readily taken by children. It is designed as a tonic and malarial prophylactic for children living in malarious sections. It will serve for active medication in acute cases of malarial disease of three years or younger by giving the dose at hourly intervals:

℞. Quininæ hydrochlor....................gr. v-x
Alcoholis ......................................ʒi
℞. Ol. cinnamomi
Ol. anisi āā...............................m. xxx-xl
Magnesiæ, q. s.
Aquæ ...........................................℥i
M. Let stand for some hours; filter.

Mix one and two and add:
Syr. simp......................................℥iii
Carmin or cochineal sol.....................m. v.
Sig. One or two drams as directed.

Saccharin in small quantity helps to disguise the larger dose of quinin. Fowler's solution may be added if indicated, or sodium bromid for children made irritable by quinin.—*Med. Seminary.*

### Treatment of Influenza.

Dr. Bartholow writes that his practice is to administer at the beginning of the local inflammation, 1/6 of a grain (adult dose) of one of the salts of pilocarpin. Pilocarpin sets up a brief stage of dryness immediately followed by increased secretion and presently the mucous glands, the salivary and cutaneous sweat-glands pour forth an abundant secretion. A sufficient dose of pilocarpin, administered at the right time, will often abort an acute catarrh or common cold. One dose should be given about two or three hours before retiring for the night so that the process of salivation and sweating is ended before sleep begins.

On the second day duboisin should be given, from 1/300 to 1/200 of a grain, for it is not desirable to induce its full physiologic effect. This quantity given once or twice in twenty-four hours will cause some dryness of the throat and nasal and faucial mucous membrane and slight dilatation of the pupil. It is important to maintain only a moderate degree of impression by duboisin; beyond that the result will be disagreeable without contributing anything to the curative action.—*Med. Summary.*

## Medicolegal.

**What Constitutes an Insane Delusion.**—In ordinary language, a person is said to be under a delusion who entertains a false belief or opinion which he has been led to form by reason of some deception or fraud. But, the Supreme Court of California goes on to say, In re Scott's Estate, it is not every false or unfounded opinion which is in legal phraseology a delusion, nor is every delusion an insane delusion. If the belief or opinion has no basis in reason or probability and is without any evidence of its support, but exists without any process of reasoning, or is the spontaneous offspring of a perverted imagination, and is adhered to against all evidence and argument, the delusion may be truly called insane. But if there is any evidence, however slight or inconclusive, which might have a tendency to create the belief, it can not be said to be a delusion. One can not be said to act under an insane delusion if his condition of mind results from a belief or inference, however irrational or unfounded, drawn from facts which are shown to exist. A suspicion which rests upon evidence can not be held to be a delusion. A suspicion which has no evidence to support it is only an unsettled condition of the mind indicating doubt or mistrust, and does not constitute a delusion unless it shall develop into a fixed conviction of the existence of the fact suspected. In determining whether there was in a given case this fixed belief or conviction, the nature and temperament of the person, the circumstances under which he made the statements alleged to show an insane delusion, the habits of his life and association with others and also his conduct toward the relative or other person concerning whom they were made, and the nature of the intercourse maintained with the latter during the period within which they were made, it would seem, should be considered.

**Proof of Sanity by Letters.**—The Supreme Court of Indiana says, in Blume vs. State, that written communications, as well as oral conversations may afford evidence of the soundness or unsoundness of the mind of the writer, and may constitute a sufficient basis for the opinion of a skilled physician or alienist upon that subject. Here, in a homicide case, some twelve letters, extending in time over about eleven months and covering at least a portion of the period during which it was claimed that the accused was of unsound mind, were read in evidence and submitted to the examination of a physician as an expert witness for the purpose of obtaining his opinion upon the question of the sanity of the accused at the time of the homicide and shortly before that occurrence. In this, and in permitting the witness, after such examination, to give his opinion as to the sanity of the writer, the court finds no error. The witness, who, as the court says, showed himself thoroughly competent, described the characteristics of the written compositions of the insane, and called attention to the absence of these peculiarities in the letters in question. And, upon the basis of the coherency and consistency of these letters, the omission of everything fantastic or absurd, their apparent adherence to the facts of the situation of the writer, the quality and regularity of the handwriting, and other features pointed out by the witness, he expressed the opinion that at the time they were written the writer was of sound mind. That this evidence was competent, the supreme court declares that it entertains no doubt, the foundation on which the opinion rested having been fully made known to the jury, and the latter having had the means of estimating its weight and value. The objection that there were other letters in the possession of the state, written by the accused, and that all should be read or none, it says was not deserving of serious consideration. The state, it holds, had the right to introduce such of the letters as it deemed necessary, and to withhold all others in its possession.

**Assault and Battery in "Magnetic" Treatment.**—The Supreme Court of Wisconsin has affirmed in Bartell vs. State, a conviction of assault and battery, charged of a man who claimed to be a magnetic healer in the regular practice of his profession. He treated a young girl about 18 years of age, the person upon whom the offense was committed, at her request and with the sanction of her father. She was afflicted with some nervous trouble, and was ignorant of what was necessary on her part in receiving the massage treatment, which was the accused's method of operating. He went into a room alone with her, caused her to remove all of her clothing and then, while her naked body was wholly exposed to his view, he gave her a massage treatment lasting some fifteen minutes. The evidence also tended to show that after the treatment he took some indecent liberties with her. After stating the facts, the supreme court declares that the law relating to physical violations of the persons of females accomplished by such a species of fraud or imposition as may be exercised by a person under the pretense of necessity or authority, where the violator, because of his position, has exceptional opportunities for thus imposing upon his victim, is well settled and is not liable to be too often or too rigorously enforced. The jury was told, in substance, that if the accused treated his patient in good faith, for the purpose of curing the disease with which she was supposed to be afflicted, and in good faith caused her to expose her body to his view for the purposes of such treatment, his conduct did not constitute the offense of assault and battery; but if on the other hand, he needlessly caused such patient to expose her person to his view for his evil purposes, and she submitted because of her ignorance, and that under such circumstances and for such purpose he secured the opportunity of laying his hands upon her body, he was guilty of the offense of assault and battery. In such charge, the supreme court holds, there was no error. Nor does it consider that there was error in excluding evidence as to the accused having cured a person, by his method of treatment, afflicted with rheumatism, the jury having been distinctly instructed that whether he possessed the power he supposed or pretended he possessed was not a subject for its consideration, the only question for the jury to decide being whether, in the manner he proceeded to treat his patient on the occasion in question, he acted in good faith, or because of the manner he administered treatment to the patient he needlessly caused her to submit her body to him for the gratification of his evil desires. To this the supreme court adds that the question was, as in substance stated by the trial judge, whether he so violated rules of propriety by needlessly causing his patient to submit herself to him, pretending, and causing her to believe, that such submission was a necessary incident of the treatment for curative purposes which she solicited at his hands, that his conduct assumed the character of a trespass on her person. Two doctors were allowed to testify as experts on the part of the state regarding whether it is reasonably necessary, in giving the massage treatment to a woman, to require her to expose her person to the view of the operator and whether it is customary where the operator is a man. The witnesses testified that they, as physicians, were familiar with the massage treatment, the methods employed in giving it, and the reasonable requirements on the part of the patient in order to receive such treatment. That, the supreme court holds, sufficiently demonstrated that the witnesses possessed special knowledge of the subject upon which they were allowed to testify, and were competent to testify thereon as experts.

**Employers Not Liable for Doctors' Bills.**—An employee in a bank, store, or shop, or upon a farm, may become suddenly very ill, or in some way seriously injured so that some foreman or other employee might properly deem immediate medical attendance necessary and, in the absence of the employer, summon a physician. Is the employer liable? The Supreme Court of Michigan says, in the case of Holmes vs. McAllister, that it was cited to no authority which so holds. To this it adds that it is doubtful whether such an employer would be liable if he himself sent for the physician to attend one of his employees, though the authoritative force of this statement is taken away by the remark that it was unnecessary upon this point to express an opinion in this case. But, be that as it may, the court declares that it does not hesitate to hold that in those avocations of life unaccompanied by dangers an employer is not liable for the services of a physician summoned by his manager or foreman or other servant to attend an employee in a case of sudden illness or injury, whatever his moral obligation may be. The case directly before the court was one of a girl having her hand seriously injured while working in a laundry. The forewoman sent a boy for the doctor, not designating any particular one. The one called immediately responded, dressed the wound and treated the girl, first at her home and then at his office, until the wound was healed. Thereafter he sued the girl's employers for the amount of his bill, and recovered a verdict for $50. But even judgment for that amount the supreme court will not permit to stand. There being no evidence in this case that employment in a laundry is accompanied by any unusual dangers, it applies to it the rules stated, rather than those which have been held to apply to cases of injury to railway employees and others engaged in what are deemed extrahazardous occupations. It holds that the forewoman of the laundry had no power to bind the employers by sending for a physician to attend the injured employee. It also takes into account that he never informed the employers that he was treating her, or that he expected them to pay him, or presented a bill, until he had ceased to treat her. Nor does the court see any evidence of ratification in the testimony of the husband of the woman with whom the girl lived that he went to see one of the employers and asked him to help her, which he declined to do, stating, however, that he would pay the doctor's bill; or in the testimony of one of the doctor's attorneys that he had called upon one of the employers to try to collect the bill and the man told him that the calling of the doctor was all right—was something that he would have done himself, had he been there in the laundry at the time, and that he was willing to pay for the first visit, whatever that might be worth, though he didn't think that he ought to pay the entire bill. Moreover, not only does the court hold that, as already shown, the employers were not originally liable, and that there was no evidence of ratification, but it declares that the language of these two witnesses imported no more than a promise to pay the debt of another, which is void under the statute of frauds requiring such a promise to be in writing. And [illegible] more [illegible]atically than it holds that the doctor [illegible] his own services, does the court declare [illegible] the services of the two physicians [illegible] to the girl's employers, one for [illegible] him in an operation.

# Association News.

## AMERICAN MEDICAL ASSOCIATION.

*Fifty-first annual meeting, held at Atlantic City, N. J., June 5-8, 1900.*

### Official Minutes of the General Sessions.

### June 5—First General Session.

Of the vice-presidents and ex-presidents of the Association there were seated on the platform Drs. Henry O. Marcy, E. D. Ferguson, Nicholas Senn, Joseph M. Mathews, W. D. Middleton, Donald Maclean and Charles A. Wheaton.

The Association was called to order at 10:20 a.m., by the president, Dr. W. W. Keen, Philadelphia.

Prayer was offered by the Rev. Frederick J. Stanley.

Dr. J. F. Marchand, Ohio, on behalf of the citizens of Canton, presented to President Keen the insignia of authority and of power, in the form of a gavel made from the oak connected with President McKinley's residence.

The gavel was accepted by President Keen in a brief, but befitting speech.

The acting-governor of New Jersey, Wm. M. Johnson, was then introduced, and delivered the following:

#### ADDRESS OF WELCOME.

You have already been made aware of the fact that the governor of New Jersey is absent, and that you are to be addressed by the acting-governor of this commonwealth. When I assign as the reason of Governor Voorhees' absence that he is "half seas-over" I mean no disrespect to his excellency, who is my valued friend, and whose personal habits are unexceptionable. It was his purpose to be present to-day to offer his greeting to the members of this Association, but he is across the seas on the advice of his doctor, for here as elsewhere, there is always one higher in authority than the chief executive, and that is the family physician. If that physician is a member of this honorable body, as I have no doubt he is, it may be a serious question whether his action in banishing the governor at this time does not require investigation at your hands. The constitution of New Jersey provides that in case of absence from the state of the governor, the powers, duties and emoluments of the office shall devolve on the president of the senate, who thereby becomes the acting-governor. A careful investigation of our statutes to ascertain the duties of the governor, fails to disclose among those duties the obligation or privilege of addressing the members of this magnificent association. I therefore have concluded that this great honor must be deemed one of the "emoluments" of the office devolving on me by the constitutional provision already mentioned. I certainly esteem it a high privilege and a distinguished honor to be permitted to welcome you to-day, and only regret that you are not to have the opportunity to meet and hear that most charming man and successful governor, Foster M. Voorhees.

The hospitality of Atlantic City is proverbial. Being the greatest watering-place in America, if not in the world, it is accustomed to entertain most royally, and is never happier than when entertaining those, who, like yourselves, by virtue of their intellectual, personal or representative character, occupy positions of usefulness or of honor.

But I am here to greet you in the name of the people of New Jersey, and in their behalf to extend a most cordial welcome. I thank you for the honor done the state by the selection of this place for your annual meeting, and desire to express the wish that you may have an agreeable and successful session of this great representative Association.

In case there should be a marked improvement in the condition and health of your patients while you are enjoying your vacation here, I trust it may not be charged solely to your absence from home.

We are justly proud of the fact that the first medical society in America was established in this state. In the year 1766, while New Jersey was still a province, a permanent organization was formed by some of the leading physicians of the colony, for the advancement of the profession, on a basis which was most honorable in its aims and in the high ethical purposes of its founders. I understand that the original book of minutes of this association is still in the possession of the Medical Society of New Jersey, in a good state of preservation. Its articles of association would prove a model for similar societies at the present day. It is a matter of surprise to me to learn, as I lately have, that so many of these associations formed by medical men for mutual benefit and the improvement of the profession, trace their history back to the early years of the century, and that several, like the medical society of this state, go back far beyond the limit of the one hundred years. (Applause.)

Even in those early days American medicine was distinguished by its high ideals and its desire to make the general fund of professional knowledge available to all who desired to enjoy its benefit.

It seems to me that in no department of human activity is there to be found a more unselfish interest in a common cause, than in the noble profession to which you have devoted your lives and talents. It manifests itself in a willingness to contribute for the good of the profession whatever of value has been learned by experience or investigation. The results of most wearisome labors become at once common property. Every member feels that he owes duties to the profession, and is bound to give as well as to receive honor and help. How much of this spirit is due to the influence of this and kindred societies it is perhaps impossible to estimate, but it must be that these societies, founded as they were with such lofty standards, have done much to stimulate and develop a high conception of the duties and obligations of the profession, and to foster a noble ambition to reach the highest attainments in the learning and practice of medicine. It is inspiring to note the efforts of its members to advance the cause of medical science for the benefit of their fellow men.

The triumphs of medicine have kept pace with the progress of the mighty century now fast drawing to a close. I would not assume in this presence to recount the marvelous progress of medical science and practice, but in no department of human endeavor, in this brilliant epoch in the world's history, have there been greater gains and more illustrious achievements than in the domain of your beneficient profession. These achievements rank in importance and value with the discovery and adaptation of steam and electricity with all their dazzling results. The telegraph, the telephone, the electric light and other varied forms of electrical development, are the products of the century now closing, but of equal rank and importance are those great discoveries of medicine, which have in the same century revolutionized the practice of the profession. Every intelligent layman knows how the use of anesthetics has made surgery humane instead of barbarous, and what the modern discovery of surgical cleanliness and antiseptic treatment has done to preserve human life. He knows something of the enormous value derived from the use of the microscope and other instruments of precision, the achievements in the science of chemistry and in the new learning of biology, and especially in the domain of bacteriology. He has heard of the marvelous and almost incredible skill of daring operators and specialists. An ordinary student of affairs needs no medical training to see that a rational system of diagnosis and treatment of disease, based on substantial scientific grounds, together with an intelligent appreciation of the causes of sickness as something to be warded off and prevented if possible, are characteristics of the medical practice of the present day, in marked contrast to the empiricism of earlier years. But the advance of medical science has not served to efface from its practitioners the principles of philanthropy and charity which are so prominent in all the history of the profession. In the original constitution of the Medical Society of New Jersey, adopted in 1766, already referred to, it was among other things declared "that as we have separated ourselves to an office of benevolence and charity, we will always most readily and cheerfully when applied to, assist, gratis, by all means in our power the distressed poor and indigent in our respective neighborhoods." The modern physician has not departed from the principles thus promulgated. Few, indeed, realize the extent and value of the services rendered by a busy practitioner to those from whom he can expect no pecuniary fee or reward, oftentimes not even the reward of common gratitude for time and skill most generously and successfully bestowed. There is, I am sure, no class of men who freely give so much of faithful service for the benefit of others, as the men of your profession. Private philanthrophy may found and support hospitals, but who can measure the value of the professional services cheerfully rendered to such hospitals all over our land by the hundreds of physicians of the highest order of talent, without regard to personal inconvenience and sacrifice? (Applause.)

This magnificent association, the representative of all that is best and most progressive in the greatest school of medicine in America, should have a powerful influence in advancing the general interest of the profession. I bespeak for you a most harmonious and successful meeting here.

I trust, however, that you will not think New Jersey is all scrub-oak and pine-barrens, salt meadows and sand dunes. We have within our boundaries a country most diversified and beautiful. On the north, we are walled in by the magnificent rocks of the Palisades of the Hudson, whose preservation has lately been the subject of legislative action. The Highlands of New Jersey and all the sections of the western and central parts of the state are picturesque and attractive, a fertile soil makes it a garden spot for the two great cities on our borders, a mild and salubrious climate causes a residence here to be delightful and healthful.

This magnificent stretch of sand extending for a hundred miles along our eastern coast gives to countless thousands a chance to breathe the invigorating and life-giving ocean breezes. To these breezes we welcome you. Drink deep of the ozone which is borne in upon you by favoring winds from the bosom of the broad Atlantic! From these breezes may you gain health and vigor; from this mighty ocean may you receive new inspirations which shall lead to high resolves, and may your deliberations here still further advance the interests of that noble profession of which you are such illustrious representatives.

I thank you again for the honor of your presence here and give you all a most hearty welcome and greeting. (Applause.)

### MAYOR'S ADDRESS OF WELCOME.

Hon. F. P. Stoy, mayor of Atlantic City, was introduced and spoke as follows:

I deem it a great privilege to be present on this great occasion. It has been my duty the last few days to follow the reverend gentlemen on the programs of different delegations which have met here, all of which have been addressed. These gentlemen have done the praying, and I have extended the right hand of welcome. I am here this morning to bid you welcome, the greatest bunch of intellect that has met here for many days. (Laughter.) I want to say to you that the great gates of this city have closed behind you, and you are now surrounded by water. I am here on behalf of the people of Atlantic City to bid you a hearty and cordial welcome. I trust that your stay with us will be one of pleasure, as well as benefit to you. While we are extending a little beyond the limit, you must remember that you are at sea. We are outside of Atlantic City several hundred feet (laughter); nevertheless, I want to state to you that you have the freedom even of the outside. (Applause.) We are pleased to have you with us, and when it becomes your duty to select your next place of meeting we want you to remember that this city always extends a welcoming hand to any convention. Remember, that on such occasions as this the latch-string of Atlantic City hangs on the outside. I hope there will be nothing to mar your pleasure while here. I want to say, further, that should any of you stray from your wives, or be out late at night, and desire my assistance, the mayor of Atlantic City will remain at home during your presence here, and if you get into trouble (laughter), the mayor will be in trouble with you. I trust that this meeting will be a grand success. Ladies and gentlemen, we will be glad to meet you again. (Applause.)

An address was also made by Dr. T. S. K. Reed.

At this juncture the first vice-president, Dr. Chas. A. Wheaton, was called to the chair.

### REPORT OF COMMITTEE ON ARRANGEMENTS.

Dr. Philip Marvel, Atlantic City, reported as chairman of the Committee of Arrangements. He called attention to the official program for the order of business, entertainments, places of meetings of sections, committees, etc.

### REPORT OF GENERAL BUSINESS COMMITTEE.

The next thing in order was the report of the General Business Committee, which was read by Dr. Bulkley, the acting secretary, as follows:

The General Business Committee met for work yesterday afternoon, thirteen members being present.

The committee would call the attention of the Association to the fact that the order given last year in regard to abstracts of papers had been imperfectly carried out, as of the 492 papers on the program, only 231 had abstracts presented, and that the secretary of the Association had stated that many had been sent in very late, instead of thirty days before, as provided by the resolution of the Association.

In this connection the committee desires to call attention to the fact that too large a number of papers has often been secured, and that as suggested last year not more than thirty or forty can be properly considered during the six possible meetings of the Sections. At one meeting, in Philadelphia, four years ago, no less than 93 papers were printed on the program of the Section of Practice of Medicine, and often over 80 have appeared on different programs; a total of 2261 titles have been printed during the past four years. To facilitate the understanding of the work of the Sections, the committee would recommend for adoption the following:

*Resolved,* That the members of the Executive Committee of each Section meet the newly-elected officers of each Section on Thursday morning for the purpose of organizing the work for the ensuing year. Carried.

| NUMBER OF PAPERS ON THE PROGRAMS OF SECTIONS DURING THE PAST FOUR YEARS. | Philadelphia. 1897 | Denver. 1898 | Columbus. 1899 | Atlantic City 1900 | Total |
|---|---|---|---|---|---|
| Practice of Medicine | 93 | 45 | 83 | 59 | 280 |
| Surgery and Anatomy | 46 | 71 | 72 | 55 | 244 |
| Obstetrics and Diseases of Women | 49 | 57 | 69 | 56 | 231 |
| Opthalmology | 70 | 56 | 58 | 40 | 224 |
| Laryngology and Otology | 82 | 38 | 47 | 49 | 216 |
| Diseases of Children | 53 | 62 | 37 | 45 | 197 |
| Materia Medica, Pharmacy and Therapeutics | 28 | 81 | 59 | 48 | 216 |
| Physiology and Dietetics | 37 | 43 | 32 | 26 | 138 |
| Neurology and Medical Jurisprudence | 51 | 89 | 43 | 44 | 227 |
| Cutaneous Medicine and Surgery | 23 | 24 | 21 | 17 | 85 |
| State Medicine | 46 | 33 | 26 | 11 | 116 |
| Stomatology | 16 | 16 | 14 | 23 | 69 |
| Pathology (provisional section) | .. | .. | .. | 18 | 18 |
| | 594 | 615 | 561 | 401 | 2261 |

| | Papers Presented. | Papers Abstracted. | Not Abst. |
|---|---|---|---|
| 1. Practice of Medicine | 60 | 47 | 13 |
| 2. Obstetrics | 56 | 41 | 15 |
| 3. Surgery and Anatomy | 55 | .. | 55 |
| 4. State Medicine | 11 | 1 | 10 |
| 5. Ophthalmology | 40 | 30 | 10 |
| 6. Diseases of Children | 45 | 28 | 17 |
| 7. Stomatology | 23 | .. | 23 |
| 8. Neurology and Medical Jurisprudence | 44 | 25 | 19 |
| 9. Cutaneous Medicine and Surgery | 17 | 1 | 16 |
| 10. Laryngology and Otology | 49 | 23 | 26 |
| 11. Materia Medica, etc | 48 | 23 | 25 |
| 12. Physiology and Dietetics | 26 | .. | 26 |
| 13. Pathology | 18 | 12 | 6 |
| | 492 | 231 | 261 |

The committee nominates Dr. Edward Jackson, Denver, Colo., to serve on the committee on the Association prize essay, in place of Dr. Huntington, Sacramento, Cal., for the coming year. Recommendation adopted.

On account of the confusion which has existed in regard to the name of the committee, it would ask the Association to fix its name as the "General Executive Committee" to correspond with the name already given to the separate executive committees of the Sections of which it is composed. Adopted.

L. DUNCAN BULKLEY, M.D.
Acting Secretary.

The report was considered section by section, and the resolutions recommended by the committee were adopted.

President Keen then delivered his address, which was punctuated with applause throughout its delivery. (Referred to Executive Committee.)

Dr. Charles A. L. Reed, Cincinnati, moved that a vote of thanks be extended to the president for his able and very instructive address. Seconded and unanimously carried.

### REPORT OF TREASURER.

The treasurer, Dr. Henry P. Newman, Chicago, read his report, which was referred to the Board of Trustees.

### ANNUAL REPORT OF THE TREASURER OF THE AMERICAN MEDICAL ASSOCIATION FOR THE FISCAL YEAR ENDED DEC. 31, 1899.

In presenting my sixth annual report as treasurer, I congratulate the American Medical Association upon a continuance of her development in the most satisfactory directions.

There has been a steady increase in membership and a marked growth of the sentiment of individual interest and responsibility. This is shown in the promptness with which dues are now paid early in the year. For instance, in January, 1900, we received $10,215.00, whereas in 1895, in January and February together, our receipts amounted to but $1,711.00. For the entire year ended Dec. 31, 1899, our membership receipts were $38,965.00, being $15,593.00 in excess of those of five years ago.

The cash in hand January 1, 1900, was $13,556.36.

This, with the Indianapolis loan of $3,000.00, and government bonds $10,812.50, purchased during the year, makes our total assets at the close of the fiscal year, Dec. 31, 1899, $27,368.86, exclusive of the valuable JOURNAL plant which, being under the efficient managem[illegible] the s[illegible] Dr. Simmons, and the Trustees, is a[illegible] in th[illegible]t.

### HENRY P. NEWMAN, IN ACCOUNT WITH THE AMERICAN MEDICAL ASSOCIATION.

#### RECEIPTS.

| 1899. | | | | Dr. |
|---|---|---|---|---|
| Jan. | 1, | To cash, | balance on hand | $18,729.95 |
| June | 10, | “ “ | Registration fees, Columbus meeting | 6,125.00 |
| Oct. | 25, | “ “ | Interest on Indianapolis loan | 179.80 |
| Dec. | 30, | “ “ | Membership dues for the year, not including registration fees of Columbus meeting | 32;840.00 |
| Total | | | | $57,874.75 |

#### DISBURSEMENTS.

| 1899. | | | | |
|---|---|---|---|---|
| March | 9, | By cash, | Dr. U. O. B. Wingate, expenses as Chairman of Committee on Public Health | $ 49.62 |
| “ | 21, | “ “ | U. S. Government war bonds | 10,812.50 |
| April | 14, | “ “ | Special R. R. Agent, Columbus meeting | 23.00 |
| “ | 18 | “ “ | R. C. Shultz, stenographic report, Section on Practice of Medicine, Philadelphia meeting | 80.00 |
| May | 9, | “ “ | Plate for foreign advertisement | 14.00 |
| “ | 11, | “ “ | Safety deposit vaults, box rent | 10.00 |
| “ | 29, | “ “ | Index book for Secretary | 12.00 |
| June | 8, | “ “ | Expenses of Trustees, attending special and annual meeting in Chicago and the annual meeting at Columbus | 1,330.78 |
| “ | 8, | “ “ | Dr. Wm. B. Atkinson, Secretary Honorarium, and expenses attending annual meeting at Columbus | 432.98 |
| “ | 13, | “ “ | Dr. Geo. H. Simmons, Edr. expenses attending Columbus meeting | 48.40 |
| “ | 13, | “ “ | Dr. H. P. Newman, Treas., expenses attending Columbus meeting | 46.00 |
| “ | 13, | “ “ | Dr. C. M. Taylor, Chairman Regr. Committee, expenses of registration at Columbus meeting | 297.30 |
| “ | 20, | “ “ | Premium on Treasurer's bond | 100.00 |
| “ | 20, | “ “ | Dr. L. Duncan Bulkley, stenographic report for Executive Committee at Columbus meeting | 22.14 |
| “ | 28, | “ “ | Wm. Whitford, stenographic report proceedings at Columbus meeting. | 60.00 |
| “ | 28, | “ “ | Dr. H. O. Reik, stenographic report Section of Ophthalmology at Columbus meeting | 120.00 |
| “ | 28, | “ “ | Ira J. Williams, *stenographic report* Section Neurology and Medical Jurisprudence at Columbus meeting | 120.00 |
| “ | 28, | “ “ | Dr. B. G. Kolb, stenographic report Section on Cutaneous Medicine and Surgery at Columbus meeting | 50.00 |
| July | 7, | “ “ | Dr. O. C. Ludlow, *stenographic report* Section on Diseases of Children at Columbus meeting | 100.00 |
| “ | 11, | “ “ | Dr. H. P. Newman, Treas. half-yearly Honorarium | 500.00 |
| “ | 11, | “ “ | Dr. E. F. Smith, stenographic report Section of *Practice* of Medicine, Columbus meeting | 120.00 |
| “ | 11, | “ “ | Sundries for Treas. office | 54.82 |
| “ | 11, | “ “ | Dr. F. E. Wessels, stenographic report Section of Surgery at Columbus meeting | 120.00 |
| “ | 25, | “ “ | Wm. Whitford, stenographic report transactions of General Session and Section of Obstetrics and Diseases of Women at Columbus meeting | 230.00 |
| “ | 25, | “ “ | 2,000 copies Trustees' reports | 9.50 |
| “ | 25, | “ “ | Dues refunded for duplicate payments at Columbus meeting | 55.00 |
| Aug. | 15, | “ “ | Dr. Geo. E. Malsbary, stenographic report Section on Laryngology at Columbus meeting | 102.60 |
| “ | 23, | “ “ | Carqueville Lith. Co. letter-heads for Association | 94.35 |
| “ | 23, | “ “ | Dr. Geo. H. Simmons, Edr., subscriptions to Journal received at Columbus meeting | 350.00 |
| Nov. | 4, | “ “ | Dr. H. P. Newman, Treas., half-yearly Honorarium | 500.00 |
| “ | 16, | “ “ | Bank collection fees on drafts | 53.40 |
| Dec. | 28, | “ “ | Postage for Treas. Office | 400.00 |
| “ | 28, | “ “ | Dr. Geo. H. Simmons, Edr. Journal, requisitions for the year | 28,000.00 |
| “ | 28, | “ “ | Balance on hand | 13,556.36 |
| Total | | | | $57,874.75 |

#### ASSETS JANUARY 1, 1900.

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|---|---|
| Loan | $ 3,000.00 |
| U. S. Government Bonds | 10,812.50 |
| Cash on Hand | 13,566.36 |
| | $27,368.86 |

Respectfully submitted,
H. P. Newman, Treasurer.

Audited and found correct,
Hawley, Jones & Co., Public Accountants.
Feb. 9, 1900.

### REPORT OF SECRETARY.

The secretary, Dr. Geo. H. Simmons, Chicago, presented his report, which was referred to the General Executive Committee. It is as follows:

Pursuant to instructions adopted by resolution at the last meeting of this Association I had printed and sent to all the health boards of the country a copy of the preamble and resolutions in reference to smallpox and vaccination, which were adopted then. In attempting to carry out your instructions, I found that in several states there was no health board, and consequently it was impossible to do anything in those states, except to send to individuals who were known to be interested in health matters. In several states there is only one board of health, that is, the state board, whereas in others there is a board of health in every town in the state. In several instances, through the co-operation of the officers of the State Board of Health, it was an easy matter to get the required number distributed.

Believing that it would be advantageous and beneficial to place the Code of Ethics in the hands of the young physician as he starts out in his life-work, I wrote to every regular medical college in the country and asked its co-operation in distributing a copy of the Code of Ethics to each of their graduates. Without exception the offer to send these Codes free was accepted and very much appreciated. The result is, we have put into the hands of every graduate of eighty-one medical colleges a copy of the Code of Ethics. I am confident that the result will be beneficial to the profession at large in the future.

The following letter was received in November last:

Dr. Wm. B. Atkinson:
Secretary of the American Medical Association.
Philadelphia, Pa.

*Dear Sir:*—At the forty-seventh annual meeting of the American Pharmaceutical Association held at Put-in-Bay, O., Sept. 4-9, 1899, the following preamble and resolution were unanimously adopted, and the undersigned was instructed to transmit the same to you for presentation at the next meeting of your Association.

Yours very truly, Chas. Caspari, M.D.,
General Secretary.

Whereas, The Metric system of weights and measures is used exclusively in the United States Pharmacopeia, and is official in the pharmacopeias of nearly all nations; and

Whereas, It has become the almost universal system of weights and measures in scientific calculations; be it

*Resolved*, That the members of the American Pharmaceutical Association request the American Medical Association to use its influence with all colleges and schools of medicine recognized by them in the United States, to use exclusively the metric system in the instruction of students, beginning with the classes entering said colleges and schools in the college year 1901.

Action on this subject was taken by the Association, as recorded in Vol. xxx of the Transactions, p. 44, which is as follows:

*Resolved*, That the American Medical Association adopt the International metric system and will use it in its transactions.

Requests that those who present papers at its future meetings employ this system in their communications or reprints thereof.

Requests that the medical boards of the hospitals and dispensaries adopt the metric system in prescribing and recording cases; and that the faculties of the medical and pharmaceutical schools adopt it in their didactic, clinical, or dispensing departments.

I present also correspondence with the officers of the Inland Empire Clinical Society of Spokane, Wash., in which they ask that their society be recognized as an affiliated body with the American Medical Association. Accompanying these letters is a list of members of the Inland Empire Clinical Society, Spokane, Wash., Constitution of the Inland Empire Clinical Society and By-Laws of the same society; also a part of the Constitution and By-Laws of the Washington State Medical Society, annexed hereto.

I have received the following letter:

Cincinnati, Ohio, June 2, 1900.

Dr. Geo. H. Simmons:
Secretary of the American Medical Association.

*Dear Sir:*—I have the honor to advise you that the third Pan-American Medical Congress will be held in the City of Havana, Cuba, Dec. 26, 27, 28 and 29, A.D., 1900, and you are earnestly requested to communicate the fact to the general session of the American Medical Association.

In view of the fact that the Pan-American Medical Congress had its origin in the American Medical Association, it is earnestly requested that the latter organization appoint official delegates to attend the meeting above designated.

I have the honor to be, very respectfully,
Charles A. L. Reed,
Secretary of the International Executive Commission.

Applications have been received from members of the medical profession residing in Honolulu, Alaska, Cuba, the Philippine Islands: and sixteen members of a Honolulu medical society are subscribers to THE JOURNAL and ask to be admitted as members of the American Medical Association. I would suggest that arrangements be made whereby members of these acquired possessions may become members of the American Medical Association.

The membership of the Association is at the present time approximately 9074. Respectfully submitted,

GEORGE H. SIMMONS, Secretary.

### PAN-AMERICAN MEDICAL CONGRESS.

Dr. Dudley S. Reynolds, Louisville, offered the following resolution, which was adopted.

*Resolved,* That the nominating committee be and is hereby instructed to present in its regular report the names of two members for each state, territory, the District of Columbia, and for the army, navy, and marine-hospital service to represent the American Medical Association in the capacity, respectively, of delegates and alternates at the Third Pan-American Medical Congress, to be held in Havana, Cuba, Dec. 26, 27, 28 and 29, A.D. 1900.

### REPORT OF COMMITTEE ON DEPARTMENT OF PUBLIC HEALTH.

Dr. U. O. B. Wingate, Milwaukee, Wis., read the report of the Committee on Department of Public Health, as follows:

Your Committee on Department of Public Health desires at this time to submit a short report of progress.

Briefly speaking, the situation is as follows: The measure known as the "Spooner Bill," which has received the indorsement of this Association at its last two meetings, remains unchanged as to its provisions.

It was introduced in the Senate of the 56th, or present, Congress, by Senator Spooner of Wisconsin, and referred to the Committee on Public Health and National Quarantine, and in the House by Congressman Ray of New York, and referred to the Committee on Interstate and Foreign Commerce.

It has been an unfavorable session of Congress for such legislation, on account of the important and unusual questions to be considered, and also, on account of the close proximity to the next presidential election.

Nevertheless, much progress has been made by way of creating public sentiment, which is so essential in aiding such a movement.

Your committee has been assured by members of Congress who are advocating the bill that much more interest has been taken and much more information has been received by members of Congress concerning the importance of such legislation than ever before, and that it is only a question of time, if we continue in the work, when we will succeed in our endeavors.

Many organizations, both medical and business, have become interested, and are using their influence with their respective members of Congress in favor of the measure. The bill has now been twice formally indorsed by this Association, by the American Public Health Association, by the New York Academy of Medicine, by the New York State Medical Association, by the New York Board of Trade and Transportation, and by the New York Chamber of Commerce.

It has also received the indorsement of the conference of State and Provincial Boards of Health of North America, many state and local medical societies, also municipal and local boards of health. Its principal features were warmly indorsed at two large sanitary conventions nearly two years ago, which convened for the purpose of considering sanitary legislation for the future.

During the past year, the chairman of your committee has visited Washington several times, interviewed many members of Congress and appeared before the Senate committee. Much literature and many letters have been sent to members of Congress. At the last meeting of the Association the sum of $500 was voted for the use of the committee, and we have to report that the Board of Trustees has allowed $215 only, which is the sum expended during the year. Your committee believes that the future prospects for the creation of a national public health organization are mostly promising, and it strongly urges continued and persistent work along the lines begun.

Respectfully submitted,

U. O. B. WINGATE, M.D.,

Chairman Committee on Department of Public Health.

Dr. H. O. Walker, Detroit offered the following:

*Resolved,* That the Committee on Department of Public Health be continued and that it is hereby authorized to continue its work along the lines begun as indicated in its reports.

*Resolved,* That the Board of Trustees be and hereby is authorized and directed to allow the chairman of the Committee on Department of Public Health the sum of $400, to be used in defraying the actual expenses in the furtherance of this work.

The report and resolution were referred to the Board of Trustees.

### REPORT OF COMMITTEE ON NATIONAL LEGISLATION.

Dr. H. L. E. Johnson, Washington, D. C., read the report of the Committee on National Legislation.

## AMERICAN MEDICAL ASSOCIATION.

### COMMITTEE ON NATIONAL LEGISLATION.

H. L. E. JOHNSON, Chairman, Washington, D. C.; WILLIAM H. WELCH, Baltimore, Md.; WILLIAM L. RODMAN, Philadelphia, Pa.

WASHINGTON, D. C., June 5, 1900,

TO THE PRESIDENT AND MEMBERS OF THE AMERICAN MEDICAL ASSOCIATION:

*Gentlemen:*—In behalf of your Committee on National Legislation we beg to report that your Honorable President, in accordance with the resolution of the American Medical Association, adopted at the last meeting, appointed the following members to constitute a Committee on National Legislation, H. L. E. Johnson, of Washington, D. C.; Wm. H. Welch, of Baltimore, Md.; and Wm. L. Rodman, of Philadelphia, Pa. This Committee met in Washington D. C., Nov. 10, 1899, and after full discussion prepared the following communication which was addressed to the secretary of each state medical society in affiliation with the American Medical Association, and the Surgeons-General of the Army and Navy and Marine-Hospital Service, and also published in THE JOURNAL.

WASHINGTON, D. C., Jan. 10, 1900.

*My Dear Doctor:*—At a regular meeting of the Committee on National Legislation of the AMERICAN MEDICAL ASSOCIATION, held Nov. 10, at Washington, D. C., I was directed to request you to have your State Medical Society appoint one delegate to represent your society at the general meeting of delegates to be called by the Committee to meet in Washington, D. C., some time in January or February next (exact date not yet determined) to act in accordance with the resolution adopted by the ASSOCIATION at the Columbus meeting on June 7, 1899, which reads as follows, viz.:

*Resolved:* That the special Committee on Legislation be authorized to invite, in the name of the AMERICAN MEDICAL ASSOCIATION, the Army Medical Service, the Navy Medical Service, the Marine-Hospital Service, and each State Society of legally qualified practitioners of medicine, to send one delegate each to a conference to be held at Washington, D. C., at such time as the Committee may determine; such conference to consider the medical and sanitary legislation now pending, and the members to report to their respective societies such action as in their judgment ought to be taken.

This Committee hereby requests you to have your society consider, and instruct your delegate to the conference on the following matters to be considered at this session of Congress: 1, Department of Public Health; 2, Publication of Index Medicus; 3, The Antivivisection Bill; 4, Unification of Medical Practice Acts, and 5, Such other medical legislation of interest to your society, now pending or to be proposed during the present session. Please forward to me at your earliest opportunity, the name and address of your duly appointed delegate that I may give ample notice to him and you of the date of the proposed general conference, to be held in Washington, D. C., as provided for by the resolution of the AMERICAN MEDICAL ASSOCIATION herein quoted.

Very truly yours,

H. L. E. JOHNSON, M.D., Chairman.

In reply to the above communication, the following delegates were appointed to the conference: Surgeon-General Geo. M. Sternberg, U. S. A.; Surgeon-General Walter Wyman, U. S. Marine-Hospital Service; Gustavus Eliot, New Haven, Conn.; H. L. E. Johnson, District of Columbia; John Y. Porter, Jacksonville, Fla.; J. W. Pettit, Ottawa, Ill.; J. N. Hurty, Indianapolis, Ind.; Dudley S. Reynolds, Louisville, Ky.; William Osler, Baltimore, Md.; H. M. Bracken, St. Paul, Minn.; Frank J. Lutz, St. Louis, Mo.; Geo. H. Simmons, Nebraska; Geo. Evans Reading, Woodbury, N. J.; Robert S. Young, Concord, N. C.; L. B. Tuckerman, Cleveland, Ohio; L. Haynes Buckston, Oklahoma City, Okla.; John B. Roberts, Philadelphia; Gardner Swarts, Providence, R. I.; T. J. Tyner, Galveston, Texas (temporarily, Washington, D. C.); Henry B. Holton, Brattleboro, Vt.; W. P. Goff, Clarksburg, W. Va.; U. O. B. Wingate, Milwaukee, Wis.

The Medical Department of the United States Navy, and the medical societies of the following named states made no reply to the call of your Committee: Alabama, Arizona, Arkansas, California, Colorado, Delaware, Georgia, Idaho, Indian Territory, Kansas, Massachusetts, Michigan, Mississippi, Montana, Nevada, Oregon, South Carolina, South Dakota, Tennessee, Utah, Washington and Wyoming.

The medical societies of the following states responded but were unable to appoint a delegate to this conference for varioreasons, but principally because the state society would not meet until after the date of the meeting of the general conference, and they had no one in authority who could make such appointments *ad interim* (universal approval of the conference and its purposes was expressed): Iowa, Louisiana, Maine, New Hampshire, New Mexico, New York, North Dakota and Virginia.

Delegates from the following states, though appointed, did not register at the conference, and usually sent written excuses and regrets for their absence: Illinois, Indiana, Kentucky, Maryland, Missouri, North Carolina, Oklahoma, Rhode Island, and Vermont.

On April 7, 1900, the following call was officially sent to the secretaries of the state societies, and to duly appointed delegates.

WASHINGTON, D. C., April 7, 1900.

*Dear Doctor:*—The Committee on National Legislation of the American Medical Association at the Columbus meeting last, hereby requests you to come to Washington, D. C., to attend the meeting of the Committee to be called to order at 11 a.m., on May 1 and 2, 1900, at the Arlington Hotel. The especial subjects to be considered have been announced to you, and also published in THE JOURNAL of the Association. The Committee has decided on this date for the meeting in order that you may have the pleasure of attending the fifth triennial session of the Congress of American Physicians and Surgeons, which meets May 1-3.

*You can secure accommodations* at the Arlington Hotel at a rate of $4 and $5 a day (American plan), and we suggest that you write at once to Mr. Frank B. Bennett, manager, for your room, stating that you will attend the meeting of the National Legislative Committee of the American Medical Association, on the dates indicated. The work of the Committee will be greatly facilitated if you will kindly notify the chairman at once that you will be present at the meeting.

The Congress of Physicians and Surgeons has arranged with the railroad companies for a fare and a third on the certificate plan, and as you will attend the meeting of that Congress, you can avail yourself of the reduction in *transportation* rates.

Very truly yours.
H. L. E. JOHNSON, M.D., Chairman.

The following communication was received from the Committee of Arrangements of the Congress of American Physicians and Surgeons, extending the courtesy of visitors to the legislative delegates; subsequently waiving the registration fee.

WASHINGTON, D. C., April 18, 1900.

DR. H. L. E. JOHNSON, Chairman, Committee on National Legislation.

*My Dear Doctor:*—Having been informed that your Committee on National Legislation will be in session in this city at the time of the meeting of the Congress of American Physicians and Surgeons, I desire on the part of the Committee of Arrangements to extend to your Committee the courtesy of accrediting them as visitors to the Congress in accordance with its by-laws (see enclosed circular). Those who wish to accept this courtesy should call at the Bureau of Registration, Parlor 1, The Arlington, on arrival, and register, when they will also receive cards to the reception, cards to the "smoker" given by the Cosmos Club on the evening of May 1, and program of the meeting of the Congress.

Very truly yours,
A. R. SHAW, Chairman,
Com. of Arrang., Cong. of Am. Phys. and Surg.

## TRANSACTIONS OF THE MEETING.

The first annual conference of the National Legislative Committee of the American Medical Association was called to order by the Chairman, Dr. H. L. E. Johnson, of Washington, D. C., at 11:20 a.m., at the Arlington Hotel, Washington, D. C., twelve members present. Dr. Johnson addressed the meeting and stated the purpose for which it was called. Dr. Wm. H. Welch, of Baltimore, moved that after a general discussion the meeting adjourn until the following day, Wednesday, at 5 p.m.. The motion was seconded by Dr. L. B. Tuckerman, of Ohio, and carried. Dr. Welch moved that if any member of a state society which had not sent a delegate be in the city, he be invited to take part in the deliberations of the Conference. The motion was seconded by Dr. Tuckerman, of Ohio, and carried. On motion of Dr. Welch, the Conference adjourned.

The second session of the conference was called to order by the Chairman, Dr. H. L. E. Johnson, Washington, D. C., Wednesday, May 2, at 5:10 p.m. There were present: Drs. U. O. B. Wingate, Wisconsin; W. F. Goff, West Virginia; L. B. Tuckerman, Ohio; Geo. Evans Reading, New Jersey; Gustavus Eliot, Connecticut; T. J. Tynes, Texas; H. M. Bracken, Minnesota; Walter Wyman, U. S. Marine-Hospital Service; Wm. H. Welch, Maryland; H. L. E. Johnson, District of Columbia; J. B. Roberts, Pennsylvania; Geo. H. Simmons, Nebraska; Geo. M. Sternberg, U. S. Army; Wm. L. Rodman, Pennsylvania; Henry Sewall, of Colorado, by invitation.

The Chairman addressed the meeting, stating its object, and suggested that the following subjects be discussed in order: 1. Department of Public Health. 2. Publication of the "Index Medicus." 3. The Pending Antivivisection Bill. 4. Unification of State and National Medical Practice Laws. 5. Other Medical Bills Pending in Congress.

General Sternberg, U. S. Army, spoke of the importance of the meeting and regretted that he had several appointments at this hour which would prevent his remaining throughout the session, and requested permission to speak at this time on the various subjects under consideration. Concerning the "Index Medicus," he did not deem it advisable to urge its further publication. There is not the necessity for it now that there was a few years ago, and many of the journals are publishing indexes on their own account. The index catalogue will be kept up, and the department is always ready and willing to place its books and work at the disposal of any one desiring assistance in any particular medical, literary line. Concerning the antivivisection bill, he said he regarded this measure as being practically dead at this session, although it might come up again at some subsequent one, and it behooved the Conference to be ready for it, and be constantly on guard. He thought the Chairman was in a position to be on the lookout for its revival, and when he deemed it necessary, he should call a general meeting or notify the state delegates to act.

Dr. H. L. E. Johnson, D. C., asked General Sternberg if it was advisable to secure an appropriation, as has been urged, for the distribution of the "Index Catalogue" to libraries throughout the country. General Sternberg replied that if any library desired the catalogue, he would have the department cut off individuals on the list in favor of such libraries, this having been done in several instances. He said the original edition was 15,000, but it had been reduced to 10,000, and that any library desiring it could have it furnished on receipt of application and approval by the department.

Dr. Johnson asked General Sternberg if he had anything to suggest on medical practice acts. General Sternberg replied that it was very desirable that uniformity and reciprocity in medical practice acts should be obtained, and that a clause should be inserted in the law of each state looking to this end.

Dr. Tuckerman, Ohio, read a portion of the Ohio medical law providing reciprocity.

Dr. Reading, New Jersey, stated that his state had reciprocity clauses.

Dr. Johnson, District of Columbia, stated that the medical practice law in the District of Columbia contained a reciprocity clause.

He also asked General Sternberg if he had any suggestions to make on any of the medical matters now pending in Congress, to which General Sternberg replied that he had indorsed three bills, viz.: One making provision for increase in the medical department of the army (H. R. 4483); one providing for appointment of assistant-surgeons of volunteers (S. 4274); and one for the relief of acting assistant-surgeons of the United States Army (S. 4200).

A BILL FOR AN INCREASE IN THE MEDICAL DEPARTMENT OF THE ARMY.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled*, That there shall be added to the number of medical officers of the Army now authorized by law four assistant surgeons-general with the rank of colonel, ten deputy surgeons-general with the rank of lieutenant-colonel, thirty surgeons with the rank of major, and eighty assistant-surgeons with the rank of first lieutenant, who shall have the rank of captain at the expiration of five years' service, as now provided by law: *Provided*, That the original vacancies created by this Act in the grade of colonel, lieutenant-colonel, and major shall be filled by seniority promotion in accordance with established laws and regulations.

*Sec. 2.*—That hereafter candidates for appointment in the Medical Corps of the Army who pass a medical examining board in compliance with existing regulations shall be appointed acting [illegible] a probationary period of six months. Dur- [illegible] period they shall attend the Army Medical [illegible] the Army Medical Museum in the city of Washington, and the faculty of the Army Medical School shall report to the Secretary of War at the end of the prescribed course of instruction upon the fitness and relative standing of the probationary candidates. Those who are recommended by the faculty may then be commissioned by the President to fill existing vacancies in the Medical Corps of the Army.

*Sec. 3.*—That acting assistant-surgeons [illegible] with the provisions of section two shall be [illegible] per month, and shall not be entitled to any [illegible] in reporting for the prescribed course of instruction, or in returning to their homes if they are not recommended for a commission.

*Sec. 4.*—That the number of acting assistant-surgeons appointed *in accordance with the provisions of section two shall not exceed the* number of vacancies, existing or to result from retirements during the probationary period.

*Sec. 5.*—That candidates who have rendered satisfactory service as acting assistant-surgeons or as commissioned medical officers in the Volunteer Army of the United States for a period of six months or more shall be exempted from this period of probation, and may be commissioned at once if vacancies exist and they pass a satisfactory examination as to their physical, moral, and professional qualifications.

A BILL PROVIDING FOR THE APPOINTMENT OF ASSISTANT-SURGEONS OF VOLUNTEERS.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled*, That "contract surgeons" who have rendered faithful and satisfactory service with the Army of the United States for a period of one year, and who have passed a satisfactory examination as to their physical and professional qualifications, shall be commissioned by the President as assistant-surgeons of volunteers with the rank of first lieutenant, subject to honorable discharge from the service whenever their services are no longer required.

*Sec. 2.*—That at the end of two years' service as first lieutenants assistant-surgeons of volunteers, appointed in accordance with section one of this Act, who have rendered faithful and satisfactory service, shall be commissioned by the President as assistant-surgeons of volunteers with the rank of captain, subject to honorable discharge from the service whenever their services are no longer required; and that they shall receive pay and allowances of a captain mounted.

A BILL FOR THE RELIEF OF ACTING ASSISTANT-SURGEONS OF THE UNITED STATES ARMY.

*Be it enacted by the Senate and House of Representatives of the United States of America i*[illegible] That on and after the passage of this Act [illegible] in the Army of the United States shall h[illegible] privileges as regards leaves of absence as commissioned officers of the Army.

*Sec. 2.*—That acting assistant-surgeons in the Army of the United States who have been appointed since the first day of May, eighteen hundred and ninety-eight, who have been absent from duty, by proper authority, on account of sickness contracted in the service, shall be paid for the time of such absence at the rate per month specified in their contracts.

He further said he would be pleased to have the help and indorsement of the Conference in getting them passed, and suggested that the Committee consider the matter and give it all the help in its power. He made a motion to this end, which was seconded by Dr. Reading, of New Jersey.

Dr. Tuckerman, Ohio, suggested that there should be a copy of the bills furnished each state society's delegate, and that each member should write to his congressman stating the action of the state societies.

General Sternberg said that he would send a copy to each member.

Dr. Goff, West Virginia, requested that, inasmuch as many of the state societies would meet in the course of a few days, they be sent at once.

General Sternberg replied that he would do this.

Dr. Reading, New Jersey, moved that the Conference do all that it can for the two bills providing for contract surgeons, and the other bill of Dr. Sternberg's.

General Sternberg moved that a committee of five be appointed by the chairman to wait upon the congressional committee with the indorsement of this meeting and urge the immediate passage of the bills proposed. The motion was seconded by Dr. Reading, and carried.

Dr. Tuckerman, Ohio, suggested that a permanent committee should be appointed by the American Medical Association for this and similar purposes.

Dr. Johnson, District of Columbia, said that such a Committee had been provided for at the meeting last June.

At this juncture General Sternberg begged to be excused, and the business was taken up in its regular order.

### DEPARTMENT OF PUBLIC HEALTH.

Dr. Wingate, Wisconsin, stated that he had nothing new to report, the matter was still pending in Congress, though Senator Spooner stated to him that he hoped to get it out of his committee this week. (S. 3433, Spooner.)

Dr. Simmons, Nebraska, said he had looked into the bill, but could not see the importance of it, and would like to know whether it is indorsed by the Association.

Dr. Tuckerman, Ohio, stated that there was a great need for unity of action between the national and state health authorities, and that the only way to secure it was to have a national health commission; that he questioned very much whether the country would be willing to turn the matter over to a commissioner who would use his office for purely party influence, incidently doing what he could for the public health; that owing to the constant change of administration there would necessarily result the constant change of health officers; that it took from ten to fifteen years of constant training to fit a man for such an office, and that when an officer is chosen, not for his ability but for the support he would bring to his party, his efficiency as health officer would be absolutely *nil*.

Dr. Roberts, Pennsylvania, requested information as to what were the duties of the United States Marine-Hospital Service, and what were the provisions of the Spooner health bill. He wished to hear from General Wyman in this connection.

Dr. Johnson, District of Columbia, suggested to Dr. Roberts that for the better understanding of the situation, it might be better for Dr. Wingate to explain the provisions of his bill, the so-called Spooner bill, and give some idea of its present status in Congress, and subsequently hear from General Wyman. The suggestion being accepted by Dr. Roberts, Dr. Wingate proceeded to explain his bill, which he said was approved at the Denver meeting of the American Medical Association; he also read an extract from the Columbus meeting, which he said also indorsed it. He stated that no two people wanted the same thing, one society demanding one thing, and another society demanding another; that Congress was perfectly willing to pass a bill of this character, but wanted to know first what was wanted by the doctors, and that there must be a uniformity in their demands. He said that this bill had received the largest support all over the country from both professional and business men; that there was no intention of working against the Marine-Hospital Service, but there is a feeling all over the country that there should be a department of public health devoted solely to that work and nothing else; that nobody could be found in Congress at present to draft such a bill, and the present bill was therefore the best that could be framed.

Surgeon-General Wyman said that he might have to give an official opinion later, hence it would not do for him to anticipate his views. He thought, however, some of the features of the bill were good, though he felt quite positive that the bill as presented had never been thoroughly understood or appreciated, there being a general idea that it helped the Marine-Hospital Service, while on the contrary it disrupts it. He believes that the Marine-Hospital Service, as it is, is a splendid foundation for whatever public health service might be placed upon it. He does not believe that a double-headed service would be advisable or practicable.

General Wyman then gave a detailed outline of the work of the Marine-Hospital Service, and cited many instances to show its ability to deal with questions of public health. He concluded by saying that he did not consider it necessary for the Committee to take any action, but to let the matter rest where it is.

Dr. Welch, Maryland, said he approved the Marine-Hospital Service, but hardly thought it the place for the establishment of a national sanitary department, though he would not want anything done to interfere with its work; also, it would be better to have a bureau to start with, instead of a cabinet officer, and this can not be accomplished at present.

Dr. Bracken, Minnesota, stated that he was not in sympathy with this bill or of creating a department of any such nature; that he upheld the Marine-Hospital Service because of its independence of politics, whereas the Spooner bill proposed a department which, as stated by the previous speaker (Dr. Tuckerman), would be changed with every change of administration; that he would approve of the making of the Marine-Hospital Service a national board of health.

Dr. Roberts, Pennsylvania, indorsed Dr. Bracken's views, and said it represented his view of the situation precisely.

Dr. Tuckerman, Ohio, stated that there was a new bill just introduced designed to protect the southern coast and strengthen the national quarantine service. It is H. R. 11139 and S. 4171.

A BILL AMENDING "AN ACT GRANTING ADDITIONAL QUARANTINE POWERS AND IMPOSING ADDITIONAL DUTIES UPON THE MARINE-HOSPITAL SERVICE," APPROVED FEB. 15, 1893.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled*, That an Act granting additional quarantine powers and imposing additional duties upon the Marine-Hospital Service, approved February fifteenth, eighteen hundred and ninety-three, be amended and added to as follows.

That section six of said Act shall be amended to read as follows:

*Sec. 6.*—That on the arrival of an infected vessel at any port not provided with the proper facilities for treatment of the same, the Secretary may remand said vessel, at its own expense, to the nearest national or other quarantine station where accommodations and appliances are provided for the necessary disinfection and treatment of the vessel, passengers, and cargo; and after treatment of any infected vessel, or inspection of any vessel not infected, at a national quarantine station, and after certificate shall have been given by the United States quarantine officer at said station that the vessel, cargo, and passengers are each and all free from infectious disease or danger of conveying the same, said vessel shall be permitted to enter and admitted to entry at any port of the United States named within the certificate. But at any ports where sufficient quarantine provision has been made by State or local authorities, the Secretary of the Treasury may direct vessels bound for said ports to undergo quarantine at said State or local station."

That there shall be added the following sections:

*Sec. 10.*—National quarantine stations shall be conducted in accordance with the provisions of this Act, and the Supervising Surgeon-General, with the approval of the Secretary of the Treasury, is authorized to designate and mark the boundaries of the quarantine grounds and quarantine anchorages for vessels which are reserved for use at each United States quarantine station: and any vessel or officer of any vessel or other person trespassing or otherwise entering upon such grounds or anchorages in disregard of the quarantine rules and regulations, or without permission of the officer in charge of such station, shall be deemed guilty of a misdemeanor and subject to arrest, and, upon conviction thereof, be punished by a fine of not more than three hundred dollars or imprisonment for not more than one year, or both, in the discretion of the court. Any master or owner of any vessel or any person violating any provision of this Act, or any rule or [illegible] made in accordance with this Act, relating to [illegible] or relating to the prevention of the [illegible] infectio[illegible] diseases, or any master, owner, [illegible] making false statement relative to the [illegible] its contents, or as to the health shall be deemed guilty of a misdemeanor and subject to arrest, and upon conviction thereof be punished by a fine of not more than five hundred dollars or imprisonment for not more than one year, or both, in the discretion of the court.

*Sec. 11.*—That any port or place in the United States where the Secretary of the Treasury shall deem it necessary for the prevention of the introduction of contagious or infectious disease from a foreign port or place, incoming vessels, vehicles, or persons shall be inspected by a national quarantine officer; such officer shall be designated or appointed by the Secretary of the Treasury, on the recommendation of the Surgeon-General of the Marine-Hospital Service, and at any such port or place no vessel, vehicle, or person from any foreign port or place shall be admitted to entry or enter without a certificate of said officer that the United States quarantine regulations have been complied with. Any vessel sailing from any foreign port without the bill of health required by section two of this Act, and arriving within the limits of any collection district of the United States, and not entering or attempting to enter any port of the United States, shall be subject to such quarantine measures as shall be prescribed by regulations of the Secretary of the Treasury, and the cost of such measures shall be a lien on said vessel, to be recovered by proceedings in the proper district court of the United States, and in the manner set forth above as regards vessels from foreign ports without bills of health and entering any port of the United States.

*Sec. 12.*—That the medical officers of the United States duly clothed with authority to act as quarantine officers at any port or place within the United States, and when performing the said duties, are hereby authorized to take declarations and administer oaths in matters pertaining to the administration of the quarantine laws and regulations of the United States.

A BILL TO AMEND "AN ACT GRANTING ADDITIONAL QUARANTINE POWERS AND IMPOSING ADDITIONAL DUTIES UPON THE MARINE-HOSPITAL SERVICE," APPROVED FEB. 15, 1893.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That an Act granting additional quarantine powers and imposing additional duties upon the Marine-Hospital Service, approved February fifteenth, eighteen hundred and ninety-three, be amended and added to as follows:

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*Sec. 6.*—That on the arrival of an infected vessel at any port not provided with the proper facilities for treatment of the same the Secretary may remand said vessel, at its own expense, to the nearest national or other quarantine station where accommodations and appliances are provided for the necessary disinfection and treatment of the vessel, passengers, and cargo; and after treatment of any infected vessel, or inspection of any vessel not infected, at a national quarantine station, and after certificate shall have been given by the United States quarantine officer at said station that the vessel, cargo, and passengers are each and all free from infectious disease or danger of conveying the same, said vessel shall be permitted to enter and admitted to entry at any port of the United States named within the certificate. But at any ports where sufficient quarantine provision has been made by State or local authorities the Secretary of the Treasury may direct vessels bound for said ports to undergo quarantine at said State or local station.

That there shall be added the following sections:

*Sec. 10.*—That national quarantine stations shall be conducted in acordance with the provisions of this Act, and the Supervising Surgeon-General, with the approval of the Secretary of the Treasury, is authorized to designate and mark the boundaries of the quarantine grounds and quarantine anchorages for vessels, which are reserved for use at each United States quarantine station; and any vessel or officer of any vessel or other person trespassing or otherwise entering upon such grounds or anchorages in disregard of the quarantine rules and regulations, or without permission of the officer in charge of such station, shall be deemed guilty of a misdemeanor and subject to arrest, and upon conviction thereof be punished by a fine of not more than three hundred dollars or imprisonment for not more than one year, or both, in the discretion of the court. Any master or owner of any vessel, or any person violating any provision of this Act or any rule or regulation made in accordance with this Act, relating to inspection of vessels or relating to the prevention of the introduction of contagious or infectious diseases, or any master, owner, or agent of any vessel making a false statement relative to the sanitary condition of said vessel or its contents or as to the health of any passenger or person thereon, shall be deemed guilty of a misdemeanor and subject to arrest, and upon conviction thereof be punished by a fine of not more than five hundred dollars or imprisonment for not more than one year, or both, in the discretion of the court.

*Sec. 11.*—That any port in the United States where the Secretary of the Treasury shall deem it necessary for the prevention of the introduction of contagious or infectious disease from a foreign port or place, that incoming vessels, vehicles, or persons' shall be inspected by a national quarantine officer, such officer shall be designated or appointed by the Secretary of the Treasury, on recommendation of the Surgeon-General of the Marine-Hospital Service, and at any such port or place no vessel, vehicle, or person from any foreign port or place shall be admitted to entry or enter without a certificate of said officer that the United States quarantine regulations have been complied with. Any vessel sailing from any foreign port without the bill of health required by section two of this Act, and arriving within the limits of any collection district of the United States, and not entering or attemping to enter any port of the United States, shall be subject to such quarantine measures as shall be prescribed by regulations of the Secretary of the Treasury, and the cost of such measures shall be a lien on said vessel, to be recovered by proceedings in the proper district court of the United States and in the manner set forth above as regards vessels from foreign ports without bills of health and entering any port of the United States.

*Sec. 12.*—That the medical officers of the United States, duly clothed with authority to act as quarantine officers at any port or place within the United States, and when performing the said duties, are hereby authorized to take declarations and administer oaths in matters pertaining to the administration of the quarantine laws and regulations of the United States.

On request of Dr. Tuckerman, General Wyman explained the bills in detail.

Dr. Tuckerman, Ohio, moved that the bills be approved. Seconded by Dr. Bracken, and carried.

Dr. Tuckerman, Ohio, moved that the committee of five be instructed to present its approval to the congressional committees in connection with the army bills. Carried.

Dr. Tuckerman, Ohio, moved that it be recommended to the state societies that a standing committeee be appointed to consists of one member each from accredited medical societies.

Dr. Reading, New Jersey, questioned the advisability of admitting homeopathic physicians to such a conference, stating that they would come under the head of accredited societies.

Dr. Tuckerman explained his motion, and it was seconded by Dr. Goff.

Dr. Simmons, Nebraska, approved of such a committee, but stated that it must consist of men well informed on the subject in hand, who should come prepared to deal with each question and empowered to act as the representative of their state society.

Dr. Bracken, Minnesota, said he did not believe that at this time we should take any action for the homeopathic societies, though he is favorable to acting with them in this matter, as they are in sympathy with all public health movements.

Dr. Tuckerman, Ohio. by request, read his motion.

Dr. Welch, Maryland, moved to amend the motion so that all societies sending a delegate must be in affiliation with the American Medical Association. His motion was seconded.

Dr. Roberts, Pennsylvania, stated that he firmly approved of admitting the homeopathic physicians.

Dr. Goff, West Virginia, requested that the points of opposition be brought out.

Dr. Welch, Maryland, stated that he did not consider it wise, from a professional standpoint, to admit homeopaths.

Dr. Johnson, District of Columbia, stated that there was a clause in the Constitution of the American Medical Association covering that question.

Dr. Reading, New Jersey, stated that he believed in working with them, but that as a body he did not believe that we could ever get the American Medical Association to unite with the homeopaths.

Dr. Tuckerman, Ohio, desired to amend his resolution so as to include a representative from the Bureau of Animal Industry, and stated that he would not make a stand on the wording of the amendment, but he desired an expression of opinion from the general committee. He stated that the two main features of the amendment would be the addition of a member from the Bureau of Animal Industry, and limiting this to representatives from societies in affiliation with the American Medical Association. The amendments were agreed to, whereupon Dr. Tuckerman read the resolution as amended, and recommended that it be submitted to the American Medical Association at its meeting in June, 1900, for adoption.

RESOLVED, That the Committee on National Legislation shall consist of three members, one of whom shall be a resident of Washington, D. C., one of Baltimore and one of Philadelphia. It shall be the duty of this Committee to represent before Congress the wishes of this Association respecting pending medical and sanitary legislation. This Committee shall also invite to an annual conference to be held at Washington, D. C., one delegate each from the Army Medical Service, the Navy Medical Service, the Marine-Hospital Service, the Bureau of Animal Industry, and from each state society in affiliation with the American Medical Association: such conference to consider questions of national medical and sanitary legislation, and report to their respective bodies for action.

The resolution was seconded by Dr. Welch, Baltimore, and carried.

Dr. Tuckerman, Ohio, moved that this body recommend to the various state societies that they provide in their constitution for a standing committee on national legislation, and that they provide that one member of this shall represent their state at future conferences. The motion was seconded by Dr. Reading, and carried.

### REVIVAL OF THE "INDEX MEDICUS.

Dr. Reading, New Jersey, moved that, after considering the remarks of Surgeon-General Sternberg on the matter of the publication of the "Index Medicus," this matter be laid on the table. The motion was seconded and carried.

### ANTIVIVISECTION BILL.

Dr. Johnson, District of Columbia, said he thought the Committee should take a very positive and decided stand with respect to the antivivisection bill now pending in Congress, and specially known as S. 34. He stated that while a great deal had been done throughout the United States by the medical profession, to check or throw a damper on its passage, we as a body should denounce it, and recommend to Congress that it be not passed.

### A BILL for the Further Prevention of Cruelty to Animals in the District of Columbia.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That hereafter no person shall perform on a living vertebrate animal any experiment calculated to give pain to such animal, except subject to the restrictions hereinafter prescribed. Any person performing or taking part in performing any experiment calculated to give pain in contravention of this Act shall be guilty of an offense against this Act, and shall, if it be the first offense, be liable, at the discretion of the court by which he is tried, to a penalty not exceeding three hundred dollars, or to imprisonment for a period not exceeding six months.

*Sec. 2.*—That the following restrictions are imposed by this Act with respect to the performance on any living vertebrate animal of an experiment calculated to give pain to such animal; that is to say:

*a.* The experiment must be performed with a view to the advancement by new discovery or physiological knowledge or of knowledge which will be useful for saving or prolonging life or alleviating suffering; and

*b.* The experiment must be performed by a person holding such license from the Commissioners of the District of Columbia as in this Act mentioned, or by a duly authorized officer of the Government of the United States, or of the District of Columbia; and

*c.* The animal must, during the whole of the experiment, be completely under the influence of ether or chloroform sufficiently to prevent the animal from feeling pain, excepting only that in so-called inoculation experiments or tests of drugs or medicines, the animal need not be anesthetized nor killed afterwards, nor in tests of surgical procedure need animals be kept completely anesthetized during the process of recovery from the surgical operation. Otherwise than this the animal must be kept from pain during all experiments; and

*d.* The animal must, if the pain is likely to continue after the effect of the anesthetic has ceased, or if any serious injury has been inflicted on the animal, be killed before it recovers from the influence of the anesthetic which has been administered; and

*e.* No experiment shall be made upon any living creature, calculated to give pain to such creature, in any of the public schools of the District of Columbia; provided as follows, that is to say:

1. Experiments may be performed under the foregoing provisions as to the use of anesthetics by a person giving illustrations of lectures in medical schools, hospitals, or colleges, on such certificate being given. as in this Act hereafter mentioned, that the proposed experiments are absolutely necessary for the due instruction of the persons to whom such lectures are given, with a view to their acquiring physiological knowledge or knowledge which will be useful to them for saving or prolonging life or alleviating suffering; and

2. The substance known as urari or curare shall not, for the purposes of this Act, be deemed to be an anesthetic; and

3. Notwithstanding anything in this Act contained, no experiment calculated to give pain shall be performed on a dog or cat, except upon such certificate being given, as in this Act mentioned, stating, in addition to the statements hereinbefore required to be made in such certificate, that for reasons specified in the certificate the object of the experiment will be necessarily frustrated unless it is performed on an animal similar in constitution and habits to a cat or dog, and no other animal is available for such experiment; and an experiment calculated to give pain shall not be performed on any horse, ass, or mule, except on such certificate being given, as in this Act mentioned, that the object of the experiment will be necessarily frustrated unless it is performed on a horse, ass, or mule, and that no other animal is available for such purpose; and

4. Any exhibition to the general public, whether admission be on payment of money or gratuitous, of experiments on living animals calculated to give pain shall be illegal.

Any person performing or aiding in performing such experiment shall be deemed to be guilty of an offense against this Act, and shall, if it be the first offense, be liable to a penalty not exceeding one hundred and fifty dollars, and if it be the second or any subsequent offense, shall be liable, at the discretion of the court by which he is tried, to a penalty not exceeding six months; and any person publishing any notice of any such intended exhibition by advertisement in a newspaper, placard, or otherwise, shall be liable to a penalty not exceeding ten dollars.

A person punished for an offense under this section shall not for the same offense be punishable under any other section of this Act.

*Sec. 3.*—That the Commissioners of the District may insert, as a condition of granting any license, a provision in such license that the place in which any such experiment is to be performed by the licensee is to be registered in such manner as the said Commissioners may from time to time by any general or special order direct: *Provided,* That every place for the performance of experiments for the purpose of instruction shall be approved by the said Commissioners, and shall be registered in such manner as the said Commissioners may from time to time by any general or special order direct.

*Sec. 4.*—That the Commissioners of the District, upon application as hereinafter prescribed, may license any person whom they may think qualified to hold a license to perform experiments under this Act: *Provided only,* That a license shall not be granted to any person under the age of twenty-five years, unless he be a graduate from a medical college, duly authorized to practice medicine in the District of Columbia.

*Sec. 5.*—That the Commissioners of the District may direct any person performing experiments under this Act from time to time to make reports to them of the methods employed and the results of such experiments, in such form and with such details as the said Commissioners may require.

*Sec. 6.*—That the President of the United States shall cause all places where experiments on living vertebrate animals are carried on, in the District of Columbia, to be, from time to time, visited and inspected without previous notice for the purpose of securing compliance with the provisions of this Act; and to that end shall appoint four inspectors, who shall serve without compensation, and who shall have authority to visit and inspect the places aforesaid, and who shall report to the President of the United States from time to time the results of their observations therein, which shall be made public by him.

*Sec 7.*—That any application for a license under this Act, and for a certificate to be given as in this Act mentioned must be signed by three physicians duly licensed to practice and actually engaged in practicing medicine in the District of Columbia, and also by a professor of physiology, medicine, anatomy, medical jurisprudence, materia medica, or surgery in the medical department of any duly established reliable school or college in the District of Columbia: *Provided,* That when any person applying for a certificate under this Act is himself one of the persons authorized to sign such certificate, the signature of some other of such persons shall be substituted for the signature of the applicant.

A certificate under this section may be given for such time or for such series of experiments as the persons signing the certificate may think expedient.

A copy of any certificate under this section shall be forwarded by the applicant to the Commissioners of the District, but shall not be available until one week after a copy has been so forwarded.

The Commissioners of the District may at any time disallow or suspend any certificate given under this section.

*Sec. 8.*—That the powers conferred by this act of granting a license or giving a certificate for the performance of an experiment on living animals may be exercised by an order in writing, under the hand of any judge of a court of record having criminal jurisdiction in the District, in a case where such judge is satisfied that it is essential for the purpose of justice in a criminal case to make such experiment.

Dr. Welch, Maryland, agreed with the remarks of the Chairman, and moved that the members of the Conference approve the resolution, which he would formally submit in writing, and that they send a copy to their individual state societies. Seconded by Dr. Eliot, Conn., and carried. The resolution as submitted in writing is as follows:

Resolved: That the National Legislative Conference, composed of delegates from the state medical societies of the United States, assembled in the City of Washington, on May 2, 1900, in response to the invitation of the American Medical Association, hereby most earnestly protests against the passage of Senate bill 34, generally known as the "antivivisection bill."

Experimentation on animals is absolutely essential to the progress of physiology and pathology and has conferred inestimable benefits on practical medicine and surgery. Not a single instance of the abuse of the practice of vivisection has been shown to have occurred in the District of Columbia, where the existing law permits only "properly conducted scientific experiments or investigations, which experiments shall be performed only under the authority of the faculty of some regularly incorporated medical college, university or scientific society." No further legislation on this subject is needed.

The antivivisection bill has been condemned with practical unanimity by the entire medical profession of this country and by numerous scientific societies, including the National Academy of Sciences. This bill, if enacted into law, would inflict the most serious injury upon the medical science and art. It leaves it entirely to the discretion of two laymen, making a majority of the commissioners of the District, whether any experimentations upon vertebrate animals shall be performed at all in the District of Columbia, save that conducted under severe restrictions by certain officers of the general government. The recent appointment as president of the District Commissioners, of a gentleman known to be hostile to experimentation upon animals indicates the perils to science and medicine of entrusting to these laymen the absolute control of this important method of scientific investigation. The bill in unmistakable terms absolutely prohibits many important and useful experiments; it provides for a system of inspection of the work of experimenters without provision that the official inspectors shall possess any special qualifications for their responsible and remarkable duties; it surrounds the entire practice of experimentation with unnecessary and vexatious restrictions, and is so framed as to enable the administrators of the law virtually to put a stop to experimentations, while nominally permitting it. Experience with similar although less restrictive and more intelligent legislation in Great Britain, has demonstrated the injury which it is sure to inflict upon scientific and practical medicine. We can not believe that the Congress of the United States will disregard the united voice of the medical profession in a matter vitally concerned with the interests and progress of medicine.

Seconded by Dr. Tuckerman, and carried.

## UNIFICATION OF MEDICAL PRACTICE LAWS—STATE AND NATIONAL.

Dr. Eliot, Connecticut, suggested that this be left to the special committee of five to be appointed, to which had been referred the other matters previously considered.

Dr. Reading, New Jersey, moved that the efforts of the members of the Conference be directed through their several state societies to securing reciprocity in the various states not now so providing. The motion was seconded by Dr. Goff, West Virginia, and carried.

Dr. Tuckerman, Ohio, stated that as the regular business had been finished he would now bring up new business for discussion. He referred to the bill appropriating money for the investigation of pollution of the Potomac water. The bill is S. 559, for the investigation of pollution of water-supplies, and carries with it report No. 411, Calendar No. 427. The bill and report were submitted, and he moved its approval. Seconded and carried.

Dr. Goff, West Virginia, moved that this matter be now put in the hands of the special committee of five, which shall urge its immediate passage by Congress and personally wait on the proper committee. Seconded by Dr. Eliot, Connecticut, and carried.

### A BILL for the Investigation of Pollution of Water-Supplies.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the sum of three thousand dollars be, and is hereby, appropriated, out of moneys not otherwise appropriated, to enable the Marine-Hospital Service, under the direction of the Secretary of the Treasury, to investigate the sources of contamination of rivers and other natural sources of water supply where the sanitary condition of the people of more than one State or Territory or the District of Columbia is affected or threatened to be affected by such pollution, and to report upon what legislation is necessary to remove or prevent such pollution: *Provided*, That the first investigation shall relate to the Potomac River.

Dr. Tuckerman, Ohio, moved that the same committee to be appointed should manage also another bill, providing for the inspection of immigrants at the port of embarkation, and that this bill should be indorsed by the committee and recommended to the state societies for indorsement. Seconded and carried.

General Wyman at this point explained the bill in full, and gave additional reasons for its immediate passage.

Dr. Tuckerman, Ohio, moved that the Chairman of this Committee (conference) be also on the special committee of five to go before Congress in support of these bills. Seconded and carried.

Dr. Welch, Maryland, moved that the Chairman of this Conference (Dr. Johnson) be the chairman of the subcommittee of five.

Dr. Johnson, District of Columbia, said he preferred not to be on the Committee at all. The wishes of the Committee prevailed, however, and the motion, seconded by Dr. Reading, carried.

Dr. Johnson, District of Columbia, then announced the special committee in accordance with the resolution, appointing: H. L. E. Johnson, Washington, D. C.; William H. Welch, Maryland; L. B. Tuckerman, Ohio; H. M. Bracken, Minnesota; W. P. Goff, West Virginia.

Dr. Tuckerman, Ohio, moved that the special committee of five meet on the following day, Thursday, at 2 p.m., and that arrangements be made to meet the proper committees in the House and Senate. The motion was seconded by Dr. Reading and carried.

On motion of Dr. Goff the Conference was declared closed, and the meeting adjourned.

### MEETING OF THE SPECIAL COMMITTEE OF FIVE.

The Committee met at the Arlington Hotel, at 2 o'clock, Thursday, May 3, 1900, discussed the matters submitted to it by the general Conference and proceeded to the Capitol to wait upon the proper committees and submit to them the recommendations of the Conference. The Committee subsequently directed the Chairman, Dr. Johnson, Washington, D. C., to prepare written indorsements of the measures agreed to by the Conference and submit them to the proper committees in the House and Senate. The resolutions of the Committee were promptly carried out by the Chairman as directed by the subcommittee.

Dr. Tuckerman, Ohio, moved that the Chairman, Dr. Johnson, should represent the subcommittee before Congress during the absence of the Conference and subcommittee. Seconded by Dr. Bracken, and carried.

WASHINGTON, D. C., May 2, 1900.

HON. JNO. A. T. HULL, Chairman,
Committee on Military Affairs, House of Representatives.

*Dear Sir:*—We are directed by the Committee on National Legislation, which represents the American Medical Association and each state and territory medical society of the United States, to inform you that at our meeting in this city to-day, we unanimously endorsed bill H. R. 4483, providing for increase in the medical department of the army, and urge its prompt passage by Congress at this session.

Very respectfully,
H. L. E. JOHNSON, Chairman,
Committee on National Legislation and Subcommittee.

SUBCOMMITTEE
Dr. W. P. Goff. West Virginia.
Dr. H. M. Bracken, Minnesota.
Dr. L. B. Tuckerman, Ohio.
Dr. H. L. E. Johnson, Washington, D. C.

Letters similar to the above were sent to Senator Jos. R. Hawley, Chairman of the Committee on Military Affairs, United States Senate, indorsing bill S. 4274, providing for the appointment of assistant-surgeons of volunteers, and bill S. 2400, providing relief for acting assistant surgeons, U. S. A. (See bills above.)

WASHINGTON, D. C., May 2, 1900.

HON. GEORGE C. VEST, Chairman,
Committee on Public Health and National Quarantine,
United States Senate.

*Dear Sir:*—We are directed by the Committee on National Legislation, which represents the American Medical Association and each state and territory medical society of the United States, to inform you that at their meeting in this city to-day we unanimously endorsed bill S. 4171, and urged its prompt passage by Congress *at this session*. We consider it absolutely necessary that the U. S. Marine-Hospital Service should be empowered to regulate the fishing smacks which are now hovering along the Florida coast and menacing the public health by infecting the Southern ports. The penalty clause for violation, the right to administer oaths, and the right to establish promptly a quarantine when necessity demands, are obviously proper functions of said Government Service, and in our opinion the bill proposed should become a law, and we do so urge your committee.

Very respectfully,
H. L. E. JOHNSON, Chairman,
Committee on National Legislation and Subcommittee.

SUBCOMMITTE
Dr. W. P. Goff, West Virginia.
Dr. H. M. Bracken, Minnesota.
Dr. L. B. Tuckerman, Ohio.
Dr. H. E. L. Johnson, Washington, D. C.

A similar letter indorsing bill H. R. 11139 (see above), was sent to Hon. W. Hepburn, Chairman of the Committee on Interstate and Foreign Commerce, House of Representatives.

WASHINGTON, D. C., May 2, 1900.

HON. WM. P. FRYE, President Pro tem., U. S. Senate,

*Dear Sir:*—We are directed by the Committee on National Legislation, which represents the American Medical Association and each state and territory medical society of the United States, to transmit to you resolutions adopted at our meeting in this city to-day, unanimously disapproving of bill S. 34 (for the further prevention of cruelty to animals in the District of Columbia) and recommending that it do not pass the Senate of the United States.

We respectfully request that the resolutions which were offered by Dr. Welch of Baltimore, and unanimously approved at our conference, be laid before the Senate for consideration.

Very respectfully,
H. L. E. JOHNSON, Chairman,
Committee on National Legislation and Subcommittee.

SUBCOMMITTE
Dr. W. P. Goff, West Virginia.
Dr. H. M. Bracken, Minnesota.
Dr. L. B. Tuckerman, Ohio.
Dr. H. L. E. Johnson, Washington, D. C.

WASHINGTON, D. C., May 2, 1900.

HON. GEORGE C. VEST, Chairman,
Committee on Public Health and National Quarantine,
United States Senate.

*Dear Sir:*—We are directed by the Committee on National Legislation, which represents the American Medical Association and each state and territory medical society of the United States, to inform you that at their meeting in this city to-day we unanimously indorsed Senate bill 559, for the investigation by the Marine-Hospital Service of the pollution of water-supplies where the sanitary condition of the people of more than one state or territory is affected, and we urge its prompt passage by Congress at this session.

Very respectfully,
H. L. E. JOHNSON, Chairman,
Committee on National Legislation and Subcommittee.

SUBCOMMITTE
Dr. W. P. Goff, West Virginia.
Dr. H. M. Bracken, Minnesota.
Dr. L. B. Tuckerman, Ohio.
Dr. H. L. E. Johnson, Washington, D. C.

### RECOMMENDATIONS OF THE COMMITTEE OF NATIONAL LEGISLATION OF THE AMERICAN MEDICAL ASSOCIATION.

Your Committee is of the opinion that an annual conference at Washington, D. C., to consider pending national and state [illegible] will awaken interest in national medical affairs and will give the legislators a medium for better understanding the wishes of the country at large, with respect to medical questions.

We recommend that the American Medical Association request affiliating medical societies of the several states and territories to provide in their constitution for the appointment of a state legislative committee, whose special duty it shall be to consider all medical legislation arising in the state legislatures and in the national Congress, and advise their constituent members thereon; further, the appointment of one member and an alternate to represent their society when called by your Committee on National Legislation to a general conference in Washington, each society paying out of its treasury the expenses of such delegate or alternate to said conference.

We suggest that such committee shall be carefully selected with respect to special individual qualifications for such service, and that the tenure of office should depend on individual fitness for the position.

We recommend the adoption of the pending amendments to the constitution of the American Medical Association, providing for a standing committee on national legislation, and we recommend that the Board of Trustees of the Association be empowered to make proper appropriations for the legitimate expenses of said committee.

We further recommend that your honorable Association approve the various measures indorsed by the delegates to the Conference at their meeting in Washington, if after due consideration you consider it just and wise to do so.

Respectfully submitted,
H. L. E. JOHNSON, M.D.
WILLIAM H. WELCH, M.D.
WM. L. RODMAN, M.D.

### REPORT OF COMMITTEE ON REVISION OF CONSTITUTION AND BY-LAWS.

Dr. E. Eliot Harris read the report of the Special Committee on Revision of Constitution and By-Laws, as follows:

The Committee on Revision of the Constitution and By-Laws respectfully reports that through the kind and valuable aid of our secretary, Dr. Geo. H. Simmons, it is in possession of a large and miscellaneous collection of ordinances, resolutions and motions amending sections of the Constitution and By-Laws. The committee at this time wishes to express its acknowledgment of the help so cheerfully given by the president, secretary and other officers of the Association, with whom it has had occasion to correspond.

After a very careful study of the complicated problems involved in the revision of the Constitution and By-Laws, the committee, animated by a sincere desire to bring order out of the chaotic condition which now exists, recommends that its report on the revision of the Constitution and By-Laws be referred back to the committee for further consideration and in order that its final report may be the result of the best thought of those who have the interests of our Association at heart, we ask that the Committee on Revision of the Constitution and By-Laws be enlarged by the addition thereto of the members of the Board of Trustees and General Executive Committee, with instructions to report at the general session on Thursday morning.

Respectfully submitted,
E. ELIOT HARRIS and DUDLEY S. REYNOLDS.

On motion, the recommendation of the committee was concurred in.

### RESOLUTION ON GIVING COMMISSIONS.

Dr. J. Henry Carstens, Detroit, Mich., offered the following resolution, which was referred to the General Executive Committee:

*Resolved,* That the receiving or giving of commissions or the division of fees, under whatever guise it may be made, shall be considered as unethical, and any member or members found guilty thereof shall be expelled from this Association, or from any Association affiliated therewith.

### AMENDMENTS TO CONSTITUTION.

The next order being amendments to the Constitution, Dr. F. W. McRae, Atlanta, moved that the consideration of such amendments be deferred until Thursday morning, and that in the meantime they be referred to the Committee on Revision of the Constitution and By-Laws. Seconded and carried.

### SECTION ON PATHOLOGY.

Dr. Ludwig Hektoen, Chicago, offered the following:

*Resolved,* That the number of sections specified in Section 11 of the By-laws be increased to thirteen by the establishing of a Section on Pathology and Bacteriology. (Referred to the General Executive Committee.)

Dr. F. F. Lawrence, Columbus, Ohio, asked for a ruling by the chair relative to the matter of registration in sections.

President Keen ruled that only the members of the Association are eligible to membership in Sections, and those who have been invited by the officers of Sections to take part in the proceedings.

Dr. Donald Maclean, Detroit, Mich., offered the following resolution, which was seconded by Dr. Reynolds, and referred to the Board of Trustees.

*Resolved,* That in future the reports of the treasurer and secretary, and of all special committees, be printed from THE JOURNAL press and circulated in advance to the attending members for the purpose of saving time in the general session and enabling the Association to act promptly and intelligently in discussing, criticizing, or adopting said reports.

On motion, the Association then adjourned until Wednesday, 10 a.m.

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### JUNE 6—SECOND GENERAL SESSION.

The Association met at 10 a.m., and was called to order by the president.

The secretary read the minutes of the previous general session, which were approved.

Dr. E. D. Ferguson, the second vice-president, was called to the chair.

Dr. William L. Rodman, Philadelphia, Pa., delivered the Oration on Surgery.

Dr. Victor C. Vaughan, Ann Arbor, Mich., followed with the Oration on State Medicine.

On motion of Dr. Marcy, Boston, a vote of thanks was extended to Drs. Rodman and Vaughan for their excellent and entertaining addresses.

Dr. Hall, Chicago, moved that a committee of [illegible] appointed by the chair to prepare a memorial, to be subsequently submitted to the proper authorities of the United States Government, setting forth the desirability of inaugurating a change in the methods of education at West Point relative to sanitation and camp hygiene. Seconded and referred to the General Executive Committee.

### REPORT OF GENERAL EXECUTIVE COMMITTEE.

Dr. Buckley read the report of the General Executive Committee, as follows:

At the regular meeting of yesterday, 23 members being present, the matters referred to it were fully considered and are here reported on.

The matter of revision of the Constitution and By-Laws was referred to a special committee of five, who met with the Board of Trustees in the evening, and their report will be presented later.

The bill from Dr. L. B. Tuckerman for expenses in connection with the work of the Section on State Medicine is referred to the trustees.

In accordance with the request of the Section on State Medicine, the committee recommends that the name of the Section be changed to that of "The Section of Hygiene and Sanitary Science."

It was moved and carried that this recommendation be concurred in.

The report of the secretary has been referred to a special subcommittee, which will report later.

Upon the suggestions contained in the president's address, the committee would report as follows:

1. That agitation in regard to the Rush Monument Fund should be continued and pushed to the greatest extent possible.

On motion, this section of the report was adopted.

2. That agitation in regard to the antivivisection bills should also be continued and pushed with all possible activity.

On motion, this section was adopted.

3. That hereafter members by invitation be limited to foreign delegates, eminent foreigners whom the section may desire to invite to read papers and take part in the discussions, to members of the medical staff of the army, navy and marine-hospital service, and to the occasional visiting physicians from our possessions outside of the limits of the United States proper.

It was moved that this section of the report be laid on the table. Seconded.

Dr. Dougherty, Chicago, said that inasmuch as this section of the report contemplates an amendment to the Constitution which defines the classes and qualifications of members, it could not be voted on at that time, but should be laid over until the next annual meeting.

President Keen suggested that the matter be referred to the Committee on Revision of the Constitution and By-Laws, which would report next day.

Dr. Harris, New York, said that the Committee on Constitution and By-Laws had considered the matter under discussion and had embodied it in its report, which would be presented next morning.

The chair then put the motion to table this section of the report, and it was lost.

Dr. Ferguson then moved that it be referred to the Committee on Constitution and By-Laws, which was seconded and carried.

4. That the section (provisional) known as the Section on Pathology should exist, and that the present officers of the unusual section should be empowered to elect officers in the usual manner, it to be known as the "Section of Pathology and Bacteriology."

Dr. Harris, New York, stated that the Committee on Revision of the Constitution and By-Laws had also considered this matter and would report on it the following morning. He therefore moved that this part of the report of the General Executive Committee be referred to the Committee on Constitution and By-Laws. Seconded and carried.

5. That a permanent committee of five be established to have charge of the annual exhibit, and that they shall elect [illegible] a [illegible] who is [illegible] ent [illegible] the place of next

[illegible] en considered

[illegible] would be

[illegible] moved

that this suggestion be referred to the Committee on Constitution and By-Laws, which was seconded and carried.

6. That the trustees be empowered to donate the sum of $50 toward defraying the expenses of the Thirteenth International Medical Congress.

It was moved that this matter be considered by the Board of Trustees with the favorable recommendation of the General Executive Committee. Carried.

7. Regarding the recommendation of the president that the Trustees of the Association be given the responsibility of accepting or rejecting papers presented for publication; it was moved by Dr. Mayer that the question of responsibility of accepting or rejecting of papers for publication is already covered in Section IV of the By-Laws, which the committee heartily indorses.

The recommendation of the President concerning the appropriation by the trustees of the sum of $500 each year for scientific research, the same to be carefully distributed in amounts of $50 or $100 to persons carefully selected, was deemed of such commendable nature and of so large importance that it was referred to a committee consisting of Drs. Hill, Sayre and Hughes for consideration, this committee to report at the next meeting of the committee.

Dr. T. J. Happel, Tennessee, then read the report of the Board of Trustees.

### REPORT OF THE BOARD OF TRUSTEES OF THE AMERICAN MEDICAL ASSOCIATION, MADE AT ATLANTIC CITY, JUNE 6, 1900.

*To the Officers and Members of the American Medical Association:*

Your Board of Trustees beg leave to present the following report for the year ended December 31, 1900:

#### RECEIPTS.

| 1899 | | |
|---|---|---|
| Jan. 1, | Balance Cash in Journal Office | $ 931.51 |
| Jan. 1, | Balance in Treasurer's Office | 18,729.95 |
| June 10, | Registration Fees at Columbus Meeting | 6,125.00 |
| Oct. 25, | Interest on Indianapolis Loan | 179.80 |
| Dec. 31, | Membership Fees one year | 32,840.00 |
| Dec. 31, | Subscription Fees one year | 9,488,41 |
| Dec. 31, | Sales, Reprints, etc., one year | 7,059.84 |
| Dec. 31, | Cash Advertisements one year | 33,760.82 |
| | Total Receipts | $109,115.33 |

#### EXPENDITURE JOURNAL OFFICE.

| 1899 | | |
|---|---|---|
| Dec. 31, | Paper, one year | $22,923.93 |
| “ “ | Labor, one year | 20,812.19 |
| “ “ | Salary, one year | 10,636.50 |
| “ “ | Postage, one year | 5,851.48 |
| “ “ | Editorials, one year | 4,656.41 |
| “ “ | Rent | 1,500.00 |
| “ “ | General Expense Account | 1,672.29 |
| “ “ | Subscription Commissions | 2,921.73 |
| “ “ | Advertising Commission | 710.19 |
| “ “ | News and Reporting | 1,809.34 |
| “ “ | Electros | 621.87 |
| “ “ | Electric Power | 551.50 |
| “ “ | Type | 651.06 |
| “ “ | Ink | 718.44 |
| “ “ | Metal Account | 607.51 |
| “ “ | Linotype Machine Appliances | 256.77 |
| “ “ | Press Supplies | 294.36 |
| “ “ | Bindery Supplies | 74.44 |
| “ “ | Traveling Expenses | 184.58 |
| “ “ | Bindery Account | 75.10 |
| “ “ | Stores | 86.32 |
| “ “ | Tools | 7.27 |
| “ “ | Incidentals | 17.69 |
| | Total Expense Journal Office | $77,641.01 |

#### EXPENSE TREASURER'S OFFICE.

| 1899 | | |
|---|---|---|
| Dec. 31, | Expense Trustees attending three meetings | $ 1,330.78 |
| “ “ | General account (Stenographers, etc.) | 1,901.92 |
| “ “ | Treasurer's Salary | 1,000.00 |
| “ “ | Treasurer's Expense account | 54.82 |
| “ “ | Collecting Fees paid Banks | 53.40 |
| “ “ | Postage, Treasurer | 400.00 |
| “ “ | Premium on Treasurer's Bond | 100.00 |
| “ “ | Expense Com. on Pub. Health | 49.62 |
| “ “ | Books, Printing, etc. | 106.35 |
| “ “ | Dues Refunded (Dup. Payment) | 55.00 |
| “ “ | Paid Stenographer at Philadelphia Meeting | 80.00 |
| “ “ | Paid for Foreign Ad. Plate | 14.00 |
| “ “ | Paid for Safety Box Rent | 10.00 |
| “ “ | Amount Interest U. S. Bonds | 10,812.50 |
| | Total Treas. Exp. account | $15,968.30 |
| | Expense account Journal Office | 77,641.01 |
| | | $93,609.40 |

#### CREDIT FURTHER.

| | |
|---|---|
| Bills Receivable | $ 190.00 |
| Buttons and Paper on hand | 960.42 |
| Cash in Journal Office | 799.15 |
| Cash in Treasurer's Office | 13,556.36 |
| Aggregate Credit | $109,115.33 |

| | |
|---|---|
| You have then in the hands of the Journal | $ 799.15 |
| In Treasurer's Hands | 13,556.36 |
| Total Cash on Hand | $14,355.51 |
| You have invested in Indianapolis Loan | $ 3,000.00 |
| In U. S. Bonds | 10,812.50 |
| Total Investment | $13,812.50 |
| Cash on Hand | 14,355.51 |
| Aggregate | $28,168.01 |

As already reported, you had invested $13,812.50, and a balance in the treasurer's hands of $13,556.36 on Jan. 1, 1900. While this amount was on hand Jan. 1, 1900—but in order that an up-to-date view of your cash account may be had—it is necessary to state that since Jan. 1, 1900, the close of our fiscal year, we have paid the balance due on the two Linotype machines, $5400, and have been compelled to buy and pay for a new Miehle press, $2925, and a motor to run the same, $225; again, a new cutter had to be bought, but using the old one in exchange, our new one costs us $325; and finally a new Linotype machine has been bought to aid in meeting the growing business of The Journal, the cash payment on which was $550, making a total of $9425 to be deducted from your cash on hand, leaving a real balance of only $4131.36 available for debts. We would add in regard to this apparent small balance that we were compelled to pay out $4047.65 for paper used in 1898, it being customary then to charge up accounts as paid regardless of when they were contracted. This has been changed by your Board of Trustees. All bills are cash on delivery, and we feel that we have effected a considerable saving along this line. As the books have been now correctly opened and material is charged when purchased, it makes an apparent cost for production for the year 1899 that much more than it really should be, and would increase the net gain that amount for that year.

We present you herewith an inventory of The Journal office, Dec. 31, 1899:

#### INVENTORY.

#### PRESS-ROOM AND PROOF-ROOM FURNITURE AND FIXTURES.

| | | |
|---|---|---|
| 1 | Metal Furnace | $ 75.00 |
| 285 | Galleys at 20c. | 57.00 |
| 36 | Galleys | 24.00 |
| 5 | Pairs Chases | 20.00 |
| 3 | Sets Chases | 50.00 |
| 3 | Imposing Stones | 40.00 |
| 1 | Pair Large Scales | 14.00 |
| 7 | Case Stands | 5.00 |
| 1 | Oak Washstand | 2.00 |
| 3 | Binding Tables at $2.00 | 6.00 |
| 2 | Make-up Tables | 5.00 |
| 2 | Linotype Machine Chairs | 8.00 |
| 1 | Type Cabinet, new | 24.00 |
| 1 | Type Cabinet, old | 15.00 |
| | Stands, Drawers, etc | 20.00 |
| | Journal Files | 125.00 |
| 2 | Desks at $10.00 | 20.00 |
| 3 | Oak Chairs, high back | 3.00 |
| 1 | File Case | 2.00 |
| | | $515.00 |

#### OFFICE FIXTURES AND FURNITURE.

| | | |
|---|---|---|
| | Partitions and Panel Work | $150.00 |
| 9 | Oak Chairs, high backs | 9.00 |
| 1 | Ant. Oak Desk (Ed.) | 65.00 |
| 1 | Ant. Oak Book Case (Ed.) | 20.00 |
| | Book Shelving (Ed.) | 25.00 |
| 1 | File Case (Ed.) | 60.00 |
| 1 | Card Index (Editorial Room) | 15.00 |
| 1 | Victor Safe | 15.00 |
| 1 | Large Safe | 123.50 |
| 1 | Typewriter Stand (Ed.) | 3.00 |
| 1 | Chair, Oak (Ed.) | 6.00 |
| 1 | Electric Fan | 10.00 |
| 1 | Dictionary Stand | 2.00 |
| 4 | Roll Top Oak Desks | 50.00 |
| 4 | Typewriters at $25.00 | 100.00 |
| 1 | Typewriter | 75.00 |
| 1 | Flat Top Typewriter Desk | 6.00 |
| 1 | Flat Top Subscription Clerk Desk | 6.00 |
| 2 | Flat Top Typewriter Desks | 30.00 |
| 2 | Flat Top Desks | 10.00 |
| 5 | Window Shades | 10.00 |
| 1 | Index Cabinet (Bookkeeper) | 20.00 |
| 1 | File Case (Bookkeeper) | 1.50 |
| 1 | High Desk (Bookkeeper) | 20.00 |
| 1 | Carpet (Ed. Room) | 15.00 |
| 1 | Subscription Cabinet and Base | 52.50 |
| 2 | Desk Files | 7.00 |
| 1 | Wicket | 7.50 |
| 1 | Combination Desk and Book Case | 8.00 |
| 1 | Book Case, Light Oak | 10.00 |
| 3 | Revolving Stenographers' Chairs | 10.50 |
| 7 | Revolving Chairs | 14.00 |
| 1 | Letter Filing Cabinet | 8.00 |
| 1 | Letter Press | 5.00 |
| 1 | High Stool | .50 |
| 1 | Combination Dictionary Stand and Book Case | 2.00 |
| 1 | Copy Bath | 4.00 |
| 1 | Exchange Rack | 5.00 |
| 1 | Walnut Book Case | 5.00 |
| | Miscellaneous Articles | 10.00 |
| | Total | $1,004.50 |

### MACHINERY AND PLANT.

| | |
|---|---|
| 1 Folding Machine | $1,116.25 |
| 1 Folding Machine | 175.75 |
| 1 Miehle Cylinder Press | 2,180.25 |
| 1 Miehle Cylinder Press | 1,140.00 |
| 1 Miehle Cylinder Press | 950.00 |
| 1 Miehle Cylinder Press (Not Paid) | 2,925.00 |
| 1 Crocker Wheeler Motor | 207.00 |
| 1 Crocker Wheeler Motor | 70.00 |
| 1 Pony Gordon Press | 103.56 |
| 1 Sheridan Auto Cutter | 175.00 |
| 1 Stitching Machine | 150.00 |
| 1 Proof Press | 9.00 |
| 2 Linotype Machines | 6,750.00 |
| 1 Stitcher (Not Paid) | 235.00 |
| 1 Crocker Wheeler Motor (Not Paid) | 225.00 |
| 1 Linotype Machine ordered ($550 of above paid) | 3,100.00 |
| | $19,511.80 |

### RECAPITULATION.

| | |
|---|---|
| Press Room and Proof Room Furniture and Fixtures | $ 515.00 |
| Office Furniture and Fixtures | 1,004.50 |
| Machinery and Plant | 19,511.80 |
| Total value | $21,031.30 |

Of this amount there is unpaid $5,935.

In making this inventory the depreciation on machinery, type, fixtures, etc., has been charged at a conservative basis.

No inventory was furnished last year.

The inventory given now more than doubles that reported in 1898 at Denver. All of these investments we were compelled to make. THE JOURNAL has now an almost complete office outfit and can do all the work demanded of it for the present.

The growth of THE JOURNAL for the past year has been steady. Every month has shown an increase of subscribers and the amount of advertising. Your Board of Trustees in addition to the exclusions from the pages of THE JOURNAL already ordered, have decided that no proprietary medicines advertised in the public press shall be allowed space in THE JOURNAL pages. This we felt was due to the medical profession, and less than that could not well be done.

### SUBSCRIPTION DEPARTMENT.

The following figures indicate the gross issue for each week during 1899:

| WEEKLY EDITION. | | | |
|---|---|---|---|
| Jan. | 7, | 12,000 | |
| " | 14, | 11,500 | |
| " | 21, | 11,500 | |
| " | 28, | 11,750 | 46,750 |
| Feb. | 4, | 11,800 | |
| " | 11, | 12,000 | |
| " | 18, | 12,100 | |
| " | 25, | 12,250 | 48,250 |
| Mar. | 4, | 12,200 | |
| " | 11, | 12,200 | |
| " | 18, | 12,300 | |
| " | 25, | 12,250 | 48,950 |
| Apr. | 1, | 12,200 | |
| " | 8, | 12,500 | |
| " | 15, | 13,200 | |
| " | 22, | 13,000 | |
| " | 29, | 13,200 | 64,100 |
| May | 6, | 13,200 | |
| " | 13, | 13,200 | |
| " | 20, | 13,200 | |
| " | 22, | 13,000 | 52,800 |
| June | 3, | 15,000 | |
| " | 10, | 13,200 | |
| " | 17, | 13,100 | |
| " | 24, | 12,700 | 54,000 |
| | | | 314,850 |

| WEEKLY EDITION. | | | |
|---|---|---|---|
| July | 1, | 12,700 | |
| " | 8, | 12,700 | |
| " | 15, | 13,800 | |
| " | 22, | 12,800 | |
| " | 29, | 12,700 | 63,700 |
| Aug. | 5, | 12,800 | |
| " | 12, | 12,800 | |
| " | 19, | 12,750 | |
| " | 26, | 12,700 | 51,100 |
| Sept. | 2, | 15,000 | |
| " | 9, | 15,000 | |
| " | 16, | 15,000 | |
| " | 23, | 15,000 | |
| " | 30, | 15,100 | 75,100 |
| Oct. | 7, | 15,500 | |
| " | 14, | 15,600 | |
| " | 21, | 15,600 | |
| " | 28, | 15,800 | 62,500 |
| Nov. | 4, | 15,800 | |
| " | 11, | 16,100 | |
| " | 18, | 16,000 | |
| " | 25, | 15,800 | 63,700 |
| Dec. | 2, | 16,000 | |
| " | 9, | 16,000 | |
| " | 16, | 16,000 | |
| " | 23, | 16,000 | |
| " | 30, | 16,000 | 80,000 |
| | | | 396,100 |

| | |
|---|---|
| Grand Total | 710,750 |
| Weekly Average | 13,672 |

The comparative statement below indicates the increase in THE JOURNAL'S circulation during the past year.

### COUNTING OF MAILING LIST.

| | JANUARY 1899 | 1900 |
|---|---|---|
| Copies to members | 7,997 | 8,445 |
| " " subscribers | 2,453 | 4,633 |
| " " advertisers | 200 | 233 |
| " " exchange (Domestic) | 149 | 153 |
| " " exchange (Foreign) | 56 | 59 |
| " " Med. Coll. Libraries | 104 | 8 |
| " " subscription agents | | 4 |
| | 10,959 | 13,635 |

The above indicating an increase of 2,676.

Of this increase 2628 are in new members and subscribers, which, according to records on hand, is the largest increase of any single year since the establishment of THE JOURNAL.

The following is a detailed count of mailing list by states, indicating the gains and losses during the past twelve months:

| State | Members. | Subscribers | Total | Gain for Year | Loss for Year |
|---|---|---|---|---|---|
| Alabama | 71 | 15 | 86 | 8 | |
| Alaska | | 1 | 1 | | |
| Arizona | 18 | 5 | 23 | 3 | |
| Arkansas | 66 | 26 | 92 | 13 | |
| California | 268 | 54 | 322 | 34 | |
| Colorado | 327 | 32 | 359 | | 20 |
| Connecticut | 105 | 6 | 111 | 2 | |
| North Dakota | 35 | 24 | 59 | 26 | |
| South Dakota | 22 | 17 | 39 | 10 | |
| Delaware | 25 | 6 | 31 | | 4 |
| Dist. of Col. | 120 | 43 | 163 | 3 | |
| Florida | 44 | 4 | 48 | 6 | |
| Georgia | 138 | 20 | 158 | 25 | |
| Illinois | 885 | 1052 | 1937 | 518 | |
| Idaho | 15 | 4 | 19 | 3 | |
| Indian Territory | 14 | 14 | 28 | 7 | |
| Indiana | 443 | 211 | 654 | 150 | |
| Iowa | 356 | 225 | 581 | | 29 |
| Kansas | 102 | 62 | 164 | 28 | |
| Kentucky | 167 | 155 | 322 | 69 | |
| Louisiana | 52 | 52 | 104 | 42 | |
| Maine | 47 | 10 | 57 | 9 | |
| Maryland | 142 | 63 | 205 | 52 | |
| Massachusetts | 266 | 60 | 326 | 48 | |
| Michigan | 323 | 290 | 613 | 208 | |
| Minnesota | 167 | 156 | 323 | 81 | |
| Missouri | 266 | 176 | 442 | 96 | |
| Mississippi | 49 | 21 | 70 | 14 | |
| Montana | 33 | 7 | 40 | | 1 |
| Nebraska | 144 | 70 | 214 | 33 | |
| New Mexico | 19 | 5 | 24 | 6 | |
| Nevada | 5 | 3 | 8 | | 1 |
| New Hampshire | 47 | 8 | 55 | | 2 |
| New Jersey | 172 | 20 | 192 | 14 | |
| New York | 430 | 131 | 561 | 64 | |
| North Carolina | 46 | 26 | 72 | 13 | |
| Ohio | 866 | 528 | 1394 | 484 | |
| Oklahoma Ter. | 18 | 12 | 30 | 15 | |
| Oregon | 46 | 13 | 59 | 2 | |
| Pennsylvania | 1088 | 126 | 1214 | 53 | |
| Rhode Island | 57 | 4 | 61 | 6 | |
| South Carolina | 50 | 22 | 72 | 7 | |
| Tennessee | 152 | 76 | 228 | 53 | |
| Texas | 124 | 126 | 250 | 79 | |
| Utah | 37 | 3 | 40 | | 2 |
| Vermont | 43 | 10 | 53 | 14 | |
| Virginia | 81 | 88 | 169 | 74 | |
| Washington | 41 | 15 | 56 | 9 | |
| Wyoming | 15 | 7 | 22 | 2 | |
| West Virginia | 68 | 56 | 124 | 60 | |
| Wisconsin | 286 | 173 | 459 | 75 | |
| | 8401 | 4333 | 12732 | 2518 | 59 |
| Canada | 8 | 58 | 66 | 46 | |
| Mexico | 5 | 10 | 15 | 6 | |
| Cuba (Foreign) | 4 | 3 | 7 | 7 | |
| Hawaiian Islands | 1 | 11 | 12 | 12 | |
| Philippine Islands | | 1 | 1 | 1 | |
| Foreign | 26 | 25 | 51 | 12 | |
| U. S. A. | | 171 | 171 | 64 | |
| U. S. M. Hosp. | | 21 | 21 | 21 | |
| | 8445 | 4633 | 13076 | 2687 | 59 |

| | |
|---|---|
| Advertisers | 233 |
| Domestic Exchange | 153 |
| Foreign Exchange | 59 |
| Medical College Reading Rooms | 108 |
| Agents | 4 |
| Total | 13635 |

### NUMBER OF COPIES SENT OUT JANUARY 1, 1900.

| | |
|---|---|
| Members | 8,445 |
| Subscribers | 4,633 |
| Advertisers | 233 |
| Domestic Exchange | 153 |
| Foreign Exchange | 59 |
| Medical College Reading Rooms | 108 |
| Advertisers | 4 |
| Total | 13,635 |

### ADVERTISING DEPARTMENT.

The following comparative statement indicates the increase in advertising collections during the past twelve months:

| | 1898 | 1899 |
|---|---|---|
| January | $2,061.98 | $3,292.84 |
| February | 2,415.67 | 2,391.65 |
| March | 1,556.51 | 2,763.23 |
| April | 2,603.23 | 2,595.11 |
| May | 1,095.43 | 3,240.89 |
| June | 1,568.44 | 2,343.75 |
| July | 2,698.05 | 3,453.41 |
| August | 1,187.84 | 2,608.25 |
| September | 1,635.44 | 2,093.68 |
| October | 3,350.31 | 3,891.40 |
| November | 1,719.96 | 2,734.25 |
| December | 1,735.85 | 2,262.46 |
| | $23,629.71 | $33,760.82 |

Indicating an increase of $10,131.11.

An effort is being made—and we are promised by the chairman of the Committe on Exhibits at the Atlantic City meeting that this will be carried out—to have THE JOURNAL advertisers receive preference in the allotment of space in the exhibit hall. If such an arrangement could be permanently effected, it would be a decided advantage, and inasmuch as exhibit space at the annual meetings is under the jurisdiction of the Association, it seems practicable, and would greatly assist in amalgamating the work for the final good of the Association.

The Board has attempted to reduce the affairs of THE JOURNAL to a business basis and to this end has had all of the books and papers gone over by expert accountants. New books have been opened and rearranged and the bookkeeping has been systematized. We believe your JOURNAL to be on a firm basis.

ALONZO GARCELON, President.
CHARLES A. L. REED, Secretary.
E. E. MONTGOMERY.
I. N. LOVE.
JAMES TAGGART PRIESTLEY.
JOSEPH EASTMAN.
HENRY L. E. JOHNSON.
T. J. HAPPEL.

Dr. Harris, New York, moved that the report be adopted, and that a vote of thanks be extended to the Board of Trustees, the treasurer and editor for their faithful and efficient services. Seconded.

Dr. Bishop, of Pennsylvania—When we recall the previous reports of committees and the previous occurrences we have had, we can not too highly commend the work of the Board of Trustees and of the editor for the healthy condition of our finances, because I am sure it is largely due to their efforts. I hope that the members of the profession outside of the Association will realize the importance of coming into it and making our number as great as it should be, and whether it would not be wise to call upon the various state societies to co-operate more actively in the effort to increase the circulation of THE JOURNAL by increasing the membership of the Association. It would be a benefit to the state societies as well as to the American Medical Association.

The motion of Dr. Harris was then put and carried unanimously.

### REPORT ON ASSOCIATION MEDAL.

Dr. Geo. M. Gould, Philadelphia, read the report of the Committee on American Medical Association Medal, as follows:

The committee having in charge the award of the American Medical Association Prize Medal respectfully report that they have carefully and independently examined the six essays submitted to them, and unanimously voted to recommend that the Association should award it to the author of the essay entitled "Quantitative Tests for Proteolysis," by "Ganagaru." Upon opening the envelope containing the writer's name we found the author of this essay to be Dr. A. L. Benedict, of Buffalo, N. Y. To him your committee therefore recommend the award of the prize medal. In accordance with the instructions contained in the resolution of the Association, your committee have had designed and made a gold medal about the diameter of a $20 United States gold coin, and about twice as thick, containing upon one side the stamp of the American eagle with shield, and the legend, *E pluribus unum*. Surrounding this emblem are the words "THE AMERICAN MEDICAL ASSOCIATION." Upon the other side are the words, "Prize for Best Essay," occupying the upper part, while through the center runs the design of the Esculapian staff and a tablet bearing the inscription: "Awarded to A. L. Benedict, A.M., M.D. Essay: Quantitative Tests for Proteolysis, June, 1900."

Your committee would also recommend in order to save the trouble and expense of new designs in future years, that in general features the present medal be adopted as the style of the Association medal for permanent use.

The committee would recommend that in future the recipient of the prize shall be given the option of the gold medal or a bronze replica of the medal and the balance of the appropriation in money.

The committee also recommend that the paper of Dr. Benedict be published in the Association JOURNAL.

Respectfully submitted,
GEORGE M. GOULD.
E. FLETCHER INGALS.
T. W. HUNTINGTON.
Committee.

On motion, of Dr. Bishop, the report and recommendations contained therein were adopted.

Dr. Keen then presented the medal to Dr. Benedict.

### REPORT ON SENN MEDAL.

Dr. W. L. Rodman, Philadelphia, presented a verbal report of the Committee on Senn Medal. He said that the committee, after carefully examining all papers that had been presented for the medal, were of the unanimous opinion that the writer with the *nom de plume* "Exstrophy" is entitled to the medal. The identity of the author is still unknown to the committee.

Dr. Rodman then handed President Keen an envelope containing the author's name, and asked him to open it, which he did, and the name was F. Gregory Connell, 381 East Superior Street, Chicago, Ill. The title of Dr. Connell's essay was "Exstrophy of the Bladder."

Dr. Keen then presented the medal to Dr. Connell, and said that his contribution was one of great credit to American surgery.

### REPORT ON RUSH MONUMENT FUND.

Dr. J. C. Wilson, Philadelphia, read the report of the Committee on the Rush Monument Fund, as follows:

Your committee has the honor to report that in accordance with the statement of the treasurer, Dr. Henry D. Holton, dated June 1, 1900, and hereto appended, there was received during the year ending upon that date, in cash: From the California Medical Society, $500; from the Iowa Medical Society, $240.12; from the Connecticut Medical Society, $98.28; and from Dr. Jas. T. Jelks, Hot Springs, Ark., $100; a total in new contributions of $938.40; and that the accumulated funds now in the treasurer's possession, invested in notes and bonds, amount to $10,965, which, together with the cash in hand—$365.05—reach a total of $11,330.05.

An active committeee of the Philadelphia County Medical Society, under the chairmanship of Dr. Curtin, is now engaged in an effort to raise $1500 for this fund, with a reasonable hope of success.

Under date of Jan. 5, 1900, a circular letter was forwarded by the treasurer to the presidents of the various state societies, calling attention to the pledges made at the meeting of the Association in Philadelphia in 1897, and requesting reports. The payments to the fund from the Arkansas, California, Connecticut and Iowa societies, referred to above, were made in response to this appeal. In other instances, however, the replies indicated an unaccountable lack of interest in the matter. Committees had been appointed, but had not reported; no committees had been named; one state society disclaimed any responsibility in the matter, averring that any pledge made had been unauthorized, etc.

In the report made by Dr. Gihon at the meeting last year, it is stated that "The Secretary of the Navy has assigned an unequalled site for the structure in the beautiful park fronting the United States Naval Museum of Hygiene." In that report Dr. Gihon dwells upon the fact that in fifteen years of effort no more than the sum of $10,000 had been collected, whereas $100,000 is regarded as necessary for the completion of the monument. The contributions during the past year, together with interest, have augmented that sum by nearly $1500—a rate of increase which, even could it be sustained, would with compound interest defer the realization of the plan to a period far beyond the expectancy of life of most of those present at this meeting.

In this assembly no argument is necessary in support of a design so lofty. In thus honoring the memory of Rush the profession will honor itself. In thus commemorating his abilities and achievements it will remind the world that gifts of the highest order and usefulness, of the highest beneficence, belong to that silent profession of which the Sydenham of America was a brilliant type.

Your committee respectfully represent that the matter grows more urgent as time passes, that it should be no great task for the profession of the United States to raise the remaining sum of $88.000 for this noble object, and that what the enthusiasm of Philadelphia in 1897 failed to do, the earnest purpose of the Association at Atlantic City in 1900 can surely accomplish.

Your committee suggests that three additional members be added to its number.

*Henry D. Holton, Treasurer,*

| IN ACCOUNT WITH RUSH MONUMENT FUND | Dr. |
|---|---|
| June 1, 1899, To Cash on Hand | $ 882.52 |
| To Cash from California Medical Society | 500.00 |
| To Cash from Dr. J. T. Jelks | 100.00 |
| To Cash from Iowa Medical Society | 240.12 |
| To Interest on Bonds and Mortgages | 532.00 |
| To Tulock Mortgage and Interest | 1,025.00 |
| To Cash from Connecticut Medical Society | 98.28 |
| | $3,377.92 |

| Cr. | |
|---|---|
| By Tacoma Light and Water Bonds | $2,000.00 |
| By Postage, stationary, premium, interest, com., revenue stamps | 247.87 |
| By Averill Note | 765.00 |
| By Cash on Hand | 365.05 |
| | $3,377.92 |

AMOUNT OF FUND JUNE 1. 1900.

| | |
|---|---|
| Funds Invested in Notes and Bonds | $10,965.00 |
| Cash on Hand | 365.05 |
| | $11,330.05 |

It was moved, seconded, and carried that the report be accepted and the recommendation adopted.

The president appointed as additional members of the committee on Rush monument fund, Drs. Frank Billings, L. Duncan Bulkley and W. L. Rodman.

Under the head of "Special Committees," Dr. Norman Bridge, chairman of the Committee on Tuberculosis, desired to present the report of this committee by title, as it was to be read in full in the afternoon, in the Section on State Medicine.

### NOMINATING COMMITTEE.

The secretary announced the members of the nominating committee as follows:

Committee on Nomination—Alaska, ———; Alabama, W. E. B. Davis; Arizona, Wm. Duffield; Arkansas, ———; California, W. S. Wills; Colorado, Edward Jackson; Connecticut, W. S. Barber; Delaware, Willard Springer; District of Columbia, J. Wesley Bovée; Florida, ———; Georgia, J. S. Hiers; Illinois, Frank Billings; Idaho, Ed. E. Maxey; Indian Territory, ———; Indiana, E. Walker; Iowa, J. A. Scroggs; Kansas, R. L. Magee; Kentucky, J. N. McCormick; Louisiana, Otto Joachim; Maine, ———; Maryland, Fulton; Massachusetts, E. B. Harvey; Michigan; H. O. Walker; Minnesota, A. J. Stone; Mississippi, ———; Missouri, J. N. Jackson; Montana, T. J. Murray; Nebraska, W. L. Dayton; Nevada, ———; New Hampshire, George Cook; New Jersey, A. McAlister; New Mexico, ———; New York, E. Eliot Harris; North Carolina, Chas. L. Pearson; North Dakota, I. N. Wear; Ohio, P. M. Foshay; Oklahoma, ———; Oregon, ———; Pennsylvania, W. B. Lowman; Rhode Island, ———; South Carolina, Evans; South Dakota, ———; Tennessee, Frank H. Glenn; Texas, Bacon Saunders; The United States Army, Capt. E. B. Flick; The United States Navy, Robert A. Marmion; Utah, Charles G. Plummer; United States Marine Hospital Corps, P. H. Bailhache; Vermont, D. C. Hawley; Virginia, John N. Upshur; Washington, W. C. Cox; West Virginia, John L. Dickey; Wisconsin, W. B. Hill; Wyoming, ———.

### RESOLUTION ON THE JOURNAL'S ADVERTISING POLICY.

The secretary read the following resolution, which was offered by Drs. A. A. Eshner and S. Solis-Cohen, and, on motion, was adopted:

*Resolved,* That the steps taken by the Editor and Trustees of The Journal of the American Medical Association, looking toward the fulfilment of the expressed will of the Association, excluding from its columns advertisement of nostrums and secret preparations, be cordially approved, and that the Editor and Trustees be encouraged to continue in this course until the work is completed.

The secretary read a telegram from Surgeon-General Sternberg regretting his inability to attend the meeting.

### RESOLUTION ON ORATIONS.

Dr. C. L. Bonifield, Ohio, offered the following:

*Resolved,* That the orations in Surgery, State Medicine and Medicine be omitted from the program in the future. Seconded.

Dr. L. Duncan Eve, of Nashville, moved as a substitute that the general addresses be limited to thirty minutes. Seconded.

Dr. James T. Priestley, Iowa, said that the matter of the general addresses was thoroughly discussed jointly by the Trustees and the Committee on Constitution and By-Laws, and he expressed the hope that the motions that had been made be withheld until the presentation of the report of the Committee on Constitution and By-Laws. He therefore moved as an amendment that the matter be referred to this committee.

The motion as amended was put and carried.

Dr. F. F. Lawrence, Ohio, moved that the matter of selecting a place of meeting be referred to the General Executive Committee for consideration, with a view to securing better railroad rates, to report the following morning.

The matter was so referred.

### RESOLUTION ON INSTRUCTION IN SANITATION.

Dr. Tuckerman, Ohio, presented the following resolution, which was seconded and referred to the General Business Committee.

*Resolved,* That the national legislative committee, in conjunction with the special committee on the reorganization of the army and navy medical corps, cause to be drafted a bill providing for adequate instruction in hygiene and sanitation in the national military and naval academies, such bill to be discussed and perfected at the next meeting of the joint national legislative committee of the American Medical Association and affiliated societies, and to be pushed through Congress as speedily as possible.

Dr. Savage, Nashville, moved that one or more of the vice-presidents stand at the entrance to the hall during the general meeting hereafter to keep order. Seconded.

Dr. English, New Jersey, moved as a substitute that this matter be referred to the Committee of Arrangements.

The substitute was seconded and carried.

On motion, the Association adjourned until Thursday morning, 10 o'clock.

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### June 7—Third General Session.

The Association met at 10 a.m., and was called to order by the president.

The secretary read the minutes of the previous general session, which were approved.

The third vice-president, Dr. J. M. Allen, was called to the chair.

Dr. John A. Witherspoon, Nashville, Tenn, delivered the Oration on Medicine. The address was listened to with marked attention, and the speaker was warmly applauded throughout its delivery.

Dr. Tuckerman, Ohio, moved that a vote of thanks be extended to Dr. Witherspoon for his interesting and able address, which was seconded and carried.

### REPORT OF GENERAL EXECUTIVE COMMITTEE.

The report of the General Executive Committee was then read by Dr. Bulkley, as follows:

1. The resolution of Dr. L. B. Tuckerman in regard to instruction in hygiene and sanitation in the National Military and Naval academies is recommended to the Association for adoption.

Dr. Reynolds, Kentucky, moved that the action of the General Executive Committee be concurred in, which was seconded and carried.

2. The resolution of Dr. Hall, of Chicago, covering the same ground, is not necessary.

3. The resolution of Dr. F. F. Lawrence, Ohio, that the matter of selecting a place of meeting be referred to the General Executive Committee for consideration, with a view, if possible, of securing better railroad rates, is not recommended for adoption, as that duty, by the Constitution, belongs to the Nominating Committee and can not be altered by resolution.

4. The motion of Dr. Carstens, Michigan, relative to the division of fees, as belonging to the organic law of the Association, was referred to the special Committee on Revision of the Constitution and By-Laws, which will report later.

5. The committee believes that the Association yesterday, on the request of the Committee on Prize Medal, resolved that it be thrown open to others outside of the Association. After very full consideration, the committee recommends that the action be reversed, and that the prize medal be open for competition only to members of the Association.

On motion of Dr. Harris, New York, the recommendation of the General Executive Committee was adopted.

6. The committee indorsed the action of the Prize Medal Committee and accepted the medal offered as a model for future medals.

7. Upon the recommendation of the President that an appropriation be made for the promotion of scientific research, the committee recommends the following:

*Resolved,* That the suggestions of the president be adopted, namely, that the Trustees set aside the sum of $500 annually for the encouragement of scientific research, with the further recommendation that, as our financial condition will permit, in the future, the sum be increased to as great extent as possible. Also that the manner in which this sum is to be expended be left to the Committee on Scientific Research, provided, however, that sums to be given to individuals do not exceed $50 to $100 at one time.

On motion this recommendation of the General Executive Committee was adopted.

8. The report of the secretary, which was referred to the committee, does not contain anything requiring action by the [illegible]

9. The Section on Neurology and Medical Jurisprudence has voted, requesting that its name be changed to that of the "Section of Nervous and Mental Diseases." This matter was referred to the Special Committee on Constitution and By-Laws, with the recommendation that it be so changed.

10. The resolutions offered by Dr. Brower, as follow, are recommended for adoption:

*Resolved,* That a committee be appointed by the Association on the organization of the profession throughout the United States to co-operate with the Committee on National Legislation; this committee to consist of one member from each state and territory represented in the Association.

*Resolved,* That a committee of three be appointed by the president to prepare plans in detail for such committee on organization, to enter into correspondence with officers of the various state societies and take such action in the premises as it may think advisable, and that the Trustees be requested to appropriate a sum not exceeding $150 for the necessary expenses of the committee.

It was moved and seconded that the recommendation be concurred in.

Dr. Bishop, Pennsylvania, moved that the army, navy, and marine-hospital service be included in the committee. Seconded.

Dr. Tuckerman, Ohio, moved that the Bureau of Animal Industry be also added to the committee. Seconded.

Dr. Bishop accepted the amendment.

The motion with its amendments was put and carried.

The resolution offered by the Section on State Medicine that the Government of the United States be requested to make the Bertillon classification of the cause of death the basis of the mortality statistics of the census of 1900 is not recommended for adoption.

The committee would report that it has paid especial attention to the daily work of the Sections, and has had daily reports from each in regard to the numbers in attendance, the number of papers read, and the number of papers the authors of which failed to appear.

The General Executive Committee unanimously indorsed the action of its special committee, who met with the Trustees in the revision of the Constitution and By-Laws and recommended the acceptance of their work, and the adoption of the revision that is to be presented.

Dr. A. J. Stone, St. Paul, then read the report of the Nominating Committee, as follows:

### REPORT OF NOMINATING COMMITTEE.

Your *Nominating Committee* met June 6, at 3:30 p.m., with Dr. A. J. Stone, of Minnesota, chairman, and W. E. B. Davis, Alabama, secretary. and begs leave to report as follows:

For president for the ensuing year, Dr. Charles A. L. Reed, Cincinnati, Ohio.

First vice-president, Dr. A W. Calhoun, Atlanta, Ga. Second vice-president, Col. A. A. Woodhull, United States Army, Denver, Colo. Third vice-president, Dr. Philip Marvel, Atlantic City, N. J. Fourth vice-president, Dr. William E. Quine, Chicago. Permanent secretary, Dr. George H. Simmons, Chicago. Assistant secretary, Dr. Wm. Davis, St. Paul, Minn. Treasurer, Dr. Henry P. Newman, Chicago. Librarian, Dr. George W. Webster, Chicago. Trustees, Dr. Miles F. Porter, Fort Wayne, Ind.; Dr. E. Fletcher Ingals, Chicago; and Dr. W. L. Rodman, Philadelphia. To fill the vacancy caused by resignation of Dr. Charles A. L. Reed, Dr. Joseph M. Mathews, Louisville, Ky. Nomination for Judicial Council: Dr. James R. Guthrie, Iowa; Dr. G. B. Gillespie, Tennessee; Dr. R. C. Moore, Nebraska; Dr. Ida J. Heiberger, District of Columbia; Dr. John B. Roberts, Philadelphia; Dr. Charles S. Rodman, Connecticut; Dr. S. L. Jepson, West Virginia. Address on Surgery, Dr. John A. Wyeth, New York.. Address on State Medicine, Dr. Geo. M. Kober, District of Columbia. Address in Medicine, Dr. N. S. Davis, Jr., Chicago. Place of meeting, St. Paul, Minn. Chairman Committee of Arrangements, Dr. John F. Fulton, St. Paul, Minn.

The secretary read a list of delegates to the Pan-American Medical Congress, at Havana, Cuba, December, 1900.

It was moved that the report of the Nominating Committee be adopted as read. Seconded.

Dr. Bulkley moved to amend the report by substituting the names of Drs. Eastman and Priestley as Trustees in the place of Drs. Porter and Ingals. Seconded.

Dr. Wishard, Indiana, moved to lay the amendment on the table. Seconded.

There being some doubt as to the vote on the amendment, a division was called for, with the result that 118 voted for tabling the amendment while 99 were opposed to it.

The president declared the motion to table carried.

The original motion to adopt was then put and carried.

Dr. Stone, Minnesota, moved that the time of meeting be on the second Tuesday in June; and that the place of meeting be St. Paul. Seconded.

Dr. Donald Maclean, Detroit, moved to substitute Minneapolis for St. Paul, Seconded.

Dr. E. F. Ingals, Chicago, asked if the Constitution did not fix the time of meeting each year.

The secretary called attention to a resolution which is to the effect that if the place of meeting is to be in the South, it is to be held in May; if North of Mason and Dixon's line, it is to be held the first week in June.

Dr. Happel, Tennessee, made the point of order that by adopting the report of the Nominating Committee it carried with it the time and place of next meeting.

*The president ruled that this point of order* was well taken.

Whereupon, Dr. Marcy, Boston, moved a reconsideration so far as the date of meeting was concerned. Seconded.

After some discussion, Dr. Harris, New York, moved that the motion to reconsider the date of the meeting be laid upon the table, which was seconded and carried.

Under the head of "Reports of Special Committees," it was moved that the report of the Committee on Necrology be read by title. Seconded and carried.

### REPORT OF BOARD OF TRUSTEES.

Dr. Happel, Tennessee, read the report of the Board of Trustees, as follows:

I have been delegated to present the report of the Board of Trustees on various matters which have been presented to them pertaining to questions of finance.

1. Upon the recommendation of the president that the Trustees be empowered to donate the sum of $50 toward defraying the expenses of the Thirteenth International Medical Congress, we report that this recommendation be concurred in, and that the amount be allowed and paid.

It was moved, seconded and carried that the recommendation of the Board of Trustees be approved.

2. Regarding the resolution offered by Dr. Maclean, that the reports of the secretary, treasurer and special committees be printed in advance and distributed to the members, the Board of Trustees would recommend that the reports of the secretary, treasurer, and Trustees be printed in advance, but not those of special committees, and we would request that copy be furnished a few days in advance of the meeting of the Association.

It was moved that this recommendation be concurred in. Seconded and carried.

3. As to the resolution in regard to the continuance of the Committee on Public Health and the appropriation of $400 for the purpose of defraying the expenses of that committee, which was also referred to the Board of Trustees, we recommend that, inasmuch as a legislative committee has been provided in the Constitution, all such matters be referred to that committee.

On motion, this recommendation was concurred in.

4. There was referred to the Board of Trustees the expense account of Dr. Tuckerman. This account was not sufficiently itemized for the board to act intelligently upon it, hence we respectfully refer it back to Dr. Tuckerman for an itemized statement of expenses, then the Board will be prepared to act upon it.

On motion, the recommendation to refer the matter back to Dr. Tuckerman was concurred in.

At this juncture, Drs. Mathews and Love were appointed as a committee to escort the president-elect to the platform.

Dr. Reed was introduced and made a short speech, accepting the presidency of the Association.

### REPORT ON REVISION OF CONSTITUTION.

Dr. Happel, Tennessee, presented the report of the Committee on Revision of the Constitution and By-Laws, which was composed of a Special Committee, the General Executive Committee, and the Board of Trustees. He said the revision had involved a great deal of work, especially as to corrections, codification, change of verbiage, etc., but they had always had in view the exact spirit, if not the letter, of the Constitution.

The report was read and adopted.

In regard to the proposed amendments the committee would report, as follows:

1. Amendment offered by the Committee on Medical Legislation:

Offered by the Committee on Medical Legislation:

Section 3, Standing Committees.—The committee on legislation shall consist of three members: one of whom shall be a resident of Washington, one of Baltimore, and one of Philadelphia. It shall be the duty of this committee to represent before Congress the wishes of this ASSOCIATION regarding pending medical and sanitary legislation. This committee shall also invite to an annual conference to be held at Washington, one delegate each from the army medical service, the navy medical service, the marine-hospital service and from each State society of legally qualified practitioners of medicine; such conference to consider questions of national medical and sanitary legislation and report to their representative bodies for actions.

The joint committee would recommend the adoption of the same with the following amendments: In the second line, insert after the word members, the following: "To be appointed annually by the President;" in the third line, strike out the word "Baltimore" and insert the word "Maryland;" and in the same line, strike out the word "Philadelphia" and insert the word "Pennsylvania;" in the ninth and tenth lines, strike out the phrase "of legally qualified practitioners of medicine," and insert "in affiliation with the American Medical Association;" in the ninth line, after the word "service," insert the words, "United States Bureau of Animal Industry;" after the word "actions" at the close of the section, insert "this body shall have power to act *ad interim* when necessity requires."

The committee recommends the adoption of this amendment with the changes mentioned.

On motion, the recommendation was concurred in.

2. The amendment to the By-Laws which follows bears upon the amendment just adopted.

In By-Laws, Section 3, Standing Committees, insert after "board of trustees" the words, "committee on legislation," and after the duty of "boards of trustees" the following clause: "The committee on legislation shall report annually to this ASSOCIATION its action during the previous year and shall recommend to the ASSOCIATION such action regarding pending legislation as it shall deem proper."

Your committee would report in regard to the proposed amendment to the By-Laws that this amendment be adopted, amending same by striking out in the fourth line the word "annually," and inserting after the word "Association" in the same line, the following: "at each annual meeting."

On motion, this amendment as amended by the committee was adopted.

3. The next amendment is one submitted by Dr. Reynolds, of Kentucky.

Offered by Dr. Dudley S. Reynolds, Louisville, Ky.:

Amend Article 2 of the Constitution, by adding to the qualifications of membership in those societies eligible to send delegates to this ASSOCIATION, after the words "Marine-Hospital Service of the United States," at the conclusion of the second paragraph; "*provided*, however, that no state, county or other auxiliary body sending representatives shall receive into its membership any one who may after 1900 have received the degree of Doctor of Medicine on less than four years of graded instruction or an equivalent requirement." (Laid over for one year.)

Your committee would report upon the amendment offered by Dr. Reynolds, Louisville, favorably, with the following change: Strike out the word and figures "after 1900" in the seventh line, and insert after the word "medicine" in the same line, the word and figures "after 1901."

The committee unanimously recommends the adoption of Dr. Reynolds' amendment, with the changes proposed.

On motion of Dr. Savage, the amendment as amended by the committee was adopted.

The last amendment is that offered by Dr. Q. C. Smith, of Texas.

Amendments to the Code of Ethics offered by Dr. Q. C. Smith, Austin, Texas:

Article 4. Section 9.—Be it

*Resolved*, That attending physicians are entitled to charge a consultation fee for each consultation, in addition to visit fee, equal in amount to that ordinarily charged in similar cases by consulting physicians residing in the same city, locality or community where the service may be rendered.

Your committee would report in regard to the amendment of Dr. Smith that said amendment be rejected.

On motion, the action of the joint committee was concurred in.

The following resolution was adopted at a joint meeting of the Trustees, Committee from General Executive Committee, and Special Committee on Revision of Constitution and By-Laws:

*Resolved*, That we report that, in accordance with a motion passed last year, the Trustees have conferred with the Executive Committee and a special committee, and have prepared for publication a revised edition of the Constitution and By-Laws of the Association, and recommend that the same be adopted and published.

On motion, the resolution was adopted.

The committee would further report in regard to some recommendations in the president's address.

As to the members by invitation, the committee would state that that matter is fully covered in the revised By-Laws.

In regard to the appointment of a committee of five to have charge of exhibits, the committee would report that the same is already provided for in the Constitution and By-Laws under the head of "Committee of Arrangements," hence the committee could not recommend the adoption of the suggestion.

Your committee report regarding the resolution offered by Dr. J. Henry Carstens, of Michigan, recommending that said resolution be rejected. The committee recognizes the fact that it would be impossible for this Association to get at the truth or the bottom facts on all such questions, hence it recommends the rejection of the resolution.

On motion, the recommendation of the committee was concurred in.

The matters presented by the National Legislative Committee and referred by the Association to this joint committee for consideration, was by that committee referred to the General Executive Committee, as being in the province of that committee.

On motion, the report of the joint committee was then adopted as a whole.

### AMENDMENTS.

The following amendments were offered:

Offered by Dr. Benjamin, Camden, N. J.:

*Amendment to By-Laws:* "A committee on statistics shall be annually appointed by the president."

Offered by Guy Hinsdale and L. B. Tuckerman:

*Resolved*, That Article I, Section VIII, by the By-Laws, be changed, so that the Nominating Committee shall include a delegate to be elected by each one of the component Sections.

Dr. A. J. Coey, Illinois, offered the following amendment:

Amend By-Law, to allow each member the right to record his vote for each officer.

This amendment was referred back to the author with instructions to put it in proper shape.

### RIGHT TO PUBLISH PAPER.

Under the head of "Miscellaneous Business," Dr. Denslow Lewis, Chicago, moved that the consideration of the Trustees' report not to publish in THE JOURNAL that portion of the proceedings of the Columbus meeting entitled "The Gynecologic Consideration of the Sexual Act" be made the special order of business for to-morrow's session, and that there be no further interference with the distribution of reprints to delegates only. Seconded.

After making his motion, Dr. Lewis said: "It was my privilege last year to read a paper in the Section of Obstetrics and Diseases of Women, which took the usual course. It was discussed, and it has been published in the Transactions of that Section, but not in THE JOURNAL. One member of the publication committee reported in favor of publishing the paper in THE JOURNAL, while two other members reported adversely. Of these two members, one is unfortunately dead, and the other is no longer a member of the Board of Trustees. The objection of the latter was on a legal ground, and in reply to his objection I have the privilege of submitting the opinions of five representative attorneys of the city of Chicago, among them a former chief justice of the Supreme Court of Illinois.

Dr. Bulkley, at this juncture, rose to a point of order, and said that all new business had to be introduced on Thursday in order to come before the General Executive Committee.

The president ruled that the point of order was not well taken, and said that the resolution would be referred to the General Executive Committee to be considered that afternoon and be voted on in general meeting the following morning.

Dr. Lewis then asked the chair the proper method to pursue to bring the matter before the members of the Association.

President Keen suggested that Dr. Lewis simply offer his resolution to the general meeting, and then the matter be referred to the General Executive Committee without discussion to be reported on by them and discussed to-morrow.

Dr. Harris, New York, moved that the whole matter be referred to the General Executive Committee with instruction to report at their pleasure, if not this year, next year. Seconded.

Dr. McRae, Georgia, moved as a substitute for the whole matter that it be the sense of the Association that the paper of Dr. Lewis be not published. Seconded.

After a prolonged discussion, which was participated in by Drs. Cotton, Hiett, and Harris, Dr. Reynolds, Kentucky, moved that all restrictions imposed on the paper of Dr. Lewis be removed. Seconded.

Dr. Jackson, Missouri, made the point of order that Dr. Reynolds' motion was in the nature of a substitute, and that it was unparliamentary to move a substitute to a substitute.

The chair decided that this point of order was well taken.

The matter was further discussed by Dr. Love, when Dr. Mayer, New York, rose to a point of order and stated that the subject-matter of the resolution was new business, and that any discussion on new business was out of order, and should be referred to the General Executive Committee.

The president then ruled that the discussion on the resolution was out of order. The resolution was therefore referred to the General Executive Committee to report to-morrow morning.

On motion, the Association adjourned until Friday morning, 10 o'clock.

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### June 8—Fourth General Session.

The Association met at 10 a.m., and was called to order by the president.

The secretary read the minutes of the previous general session, which were approved.

Dr. Hoff, Salt Lake City, asked if the Association had taken any action concerning reciprocity between the states having similar laws.

The chair replied that no action had been taken by the Association, but the matter was referred to in the report of the secretary.

Dr. DeVilbiss, Ohio, moved that the By-Laws be suspended, in so far as introducing resolutions on the last day is concerned. Seconded.

The motion was lost.

#### OFFICERS OF SECTIONS.

The secretary read the list of officers of the various sections, as follows:

Diseases of Children—Chairman, Samuel W. Kelley, Cleveland, Ohio; secretary, Wm. E. Darnall, Atlantic City, N. J.

Obstetrics and Diseases of Women—Chairman, Henry P. Newman, Chicago; secretary C. L. Bonifield, Cincinnati, Ohio.

Surgery and Anatomy—Chairman, A. J. Ochsner, Chicago; secretary, Martin B. Tinker, Philadelphia.

Laryngology and Otology—Chairman, John N. Mackenzie, Baltimore; secretary, George C. Stout, Philadelphia.

Cutaneous Medicine and Surgery—Chairman, W. L. Baum, Chicago; secretary, R. R. Campbell, Chicago.

Nervous and Mental Diseases—Chairman, H. A. Tomlinson, St. Peter, Minn.; secretary, F. S. Pearce, Philadelphia.

Materia Medica, Pharmacy and Therapeutics—Chairman, N. S. Davis Jr., Chicago; secretary, J. N. Upshur, Richmond, Va.

Physiology and Dietetics—Chairman, Elmer Lee, New York City; secretary, R. Harvey Cook, Oxford, Ohio.

Practice of Medicine—Chairman, J. M. Anders, Philadelphia; secretary, W. Britt Burns, Deckerville, Ark.

Hygiene and Sanitary Science—Chairman, Ernest Wende, Buffalo, N. Y.; secretary, J. N. Hurty, Indianapolis, Ind.

Stomatology—Chairman, R. R. Andrews, Cambridge, Mass.; secretary Eugene S. Talbot, Chicago.

Ophthalmology—Chairman, J. A. Lippincott, Pittsburg, Pa.; secretary, E. C. Ellett, Memphis, Tenn.

Pathology and Bacteriology—Chairman, Ludvig Hektoen, Chicago; secretary, Frank B. Wynn, Indianapolis, Ind.

Dr. Dougherty, Chicago, offered resolutions in regard to the late Dr. Truman W. Miller.

On motion of Dr. Reynolds, Louisville, the resolutions were adopted by a rising vote.

Dr. Denslow Lewis, Chicago, moved that that portion of the proceedings of the Columbus meeting of the American Medical Association, represented by his contribution in the Section on Obstetrics and Diseases of Women be published in The Journal. Seconded.

Dr. A. E. Baldwin, Chicago, rose to a point of order, and said that this matter had been referred to the General Executive Committee as new business and had been thoroughly discussed and considered by that committeee. The secretary of the committee, Dr. Bulkley, was not present, but would report later.

The chair ruled that the matter of Dr. Lewis' motion was not new business, and that if the Association desired to take it out of the hands of the General Executive Committee, it could do so by specific vote.

Dr. Baldwin then asked whether any member of the General Executive Committee could make a verbal report.

The chair ruled that the Association could receive a report from any member.

Dr. Baldwin then said that the resolution of Dr. Lewis, which was referred to the committee, was very fully discussed, with copies of the paper in the hands of the members. After long and very full discussion, the following resolution was adopted:

*Resolved*, That the General Executive Committee, reposing confidence in our Trustees, who have declined to have the article in question published in The Journal, recommend to the Association that the request of Dr. Lewis be not granted.

Dr. Sims, New York, moved that the report of the General Executive Committee be adopted. Seconded.

After considerable discussion by Drs. Kelly, Hiett, Love and Lewis, the president put the motion to adopt, and it was carried.

#### MEDICAL ASSOCIATION OF HAWAII.

Dr. Bulkley, speaking for the General Executive Committee, said: With reference to the report of the secretary, which was referred to the General Executive Committee, it was referred to a subcommittee, and this subcommittee reported that there was nothing in it requiring special action. But a very important matter has been overlooked, viz., application for membership by members of the Medical Association of Hawaii, who are subscribers to The Journal, and who wish to become members. Now, we have an Executive Council, and I move you, sir, that this matter, which was overlooked, be referred to the Executive Council with power. Seconded by Dr. Reynolds, Louisville.

Dr. Happel, Tennessee, said that, if he was not mistaken, Hawaii is a possession of the United States. This being so, the Constitution provides for the admission of such members whose societies are in affiliation with the American Medical Association.

The secretary stated that this organization in Hawaii was not affiliated with the American Medical Association. It is not recognized by any state society, and he asked that he be given authority to indorse the Medical Association of Hawaii.

Dr. Happel said that the Constitution provides, if that society is not in affiliation with the American Medical Association, then it shall send its Constitution and By-Laws to the Chairman of the Judicial Council, who will examine them and report to the secretary of the Association whether or not they accord with the requirements of our law. If the society is in affiliation with the Association, the secretary will then be authorized to receive them.

#### REPORT OF GENERAL EXECUTIVE COMMITTEE.

Dr. Bulkley presented the report of the General Executive Committee. At a full meeting the matters referred to it by the Association were fully discussed and action taken as follows:

1. The Section on Pathology and Bacteriology recommends the following resolutions in regard to a pathologic exhibit, which are indorsed by the Committee and recommended for adoption:

*Resolved*, That the pathologic exhibit be continued from year to year and be placed in the charge of the Pathologic Section.

*Resolved*, That to take charge of the pathologic exhibit for the next meeting and to formulate a definite plan for future exhibits, a committee of three be appointed by the chairman of the Pathologic Section, subject to the approval of the president of the American Medical Association.

*Resolved*, That the Trustees be requested to appropriate a sum not to exceed $500 for the pathologic exhibit for the next meeting, if the finances will allow it."

The committee moves its adoption. Seconded and carried.

2. Upon a second special request from the Section on State Medicine, the committee gave a hearing to four of its members in regard to the resolution reported adversely yesterday, and the committee recommend that the action of yesterday be reversed and that the following resolution be adopted, and that the Legislative Committee be instructed to further the same:

*Resolved*, That the Bertillon classification of causes of deaths be adopted by the United States Government for the mortality statistics of the census of 1900.

Dr. Reynolds, Louisville, moved the adoption of the recommendation. Seconded.

Dr. A. R. Reynolds, Illinois, moved that the recommendation of the General Executive Committee be tabled, which was seconded and carried.

3. Recognizing the great value of having a perfect report of the scientific work done by the Association correctly reported in THE JOURNAL, the committee would recommend for adoption the following resolution, which has been sent to them:

WHEREAS, There are many items of general interest developed in the general discussions of the various section meetings which are lost to the Association at large, when an official stenographic report of these discussions is not taken; therefore, be it

*Resolved*, That the General Executive Committee recommend that the Board of Trustees be requested to approve and pay bills to an amount not exceeding $1500 annually for the purpose of furnishing an official stenographer for each Section, as well as for the General Executive Committee and the general session of the Association.

The committee would move its adoption. Seconded.

Dr. Reynolds, Louisville, said that this was a matter of great importance to the members of the Association. The proceedings of the various sections should be accurately reported. He regretted that the General Executive Committee had mentioned a specific sum, because it is not known at present what the expense of such reports will be for the next year, or for any future meeting. He hoped the committee would not insist on using any specific figures.

Dr. Happel, Tennessee, moved to amend: "*Provided*, That the stenographers for the various Sections shall be secured through the Board of Trustees and the secretary of the Association and not by the Section officers themselves." Seconded.

The amendment was accepted, and the resolution as amended was adopted.

4. The committee recommends that the Association indorse the work of the Legislative Committee and give their indorsement to the following bills which they have been urging before Congress:

*a*. H. R. 4483 and S. 4274, regarding an "Increase in the Medical Department of the Army."

*b*. Bill providing for the appointment of assistant surgeons of volunteers.

*c*. Bill for the relief of acting assistant surgeons of the United States Army.

*d*. H. R. 11139 and S. 4171 to protect the Southern coast and therefore the National quarantine service.

*e*. That the S. 34 Bill for the "further prevention of cruelty to animals in the District of Columbia," in reference to antivivisection, be opposed.

*f*. S. 559 report calendar No. 427, in regard to the pollution of Potomac water.

On motion, the work of the Legislative Committee was approved.

### OFFICERS OF GENERAL EXECUTIVE COMMITTEE.

The officers of the General Executive Committee for the ensuing year are: Chairman, Dr. W. J. Mayo, Rochester, Minn.; vice-chairman, Dr. H. O. Walker, Detroit, Mich.; secretary, Dr. L. Duncan Bulkley, New York. Additional members of the Executive Council, Dr. Frank Billings, Chicago; Dr. B. Alexander Randall, Philadelphia.

The secretary read the following resolution, which was offered by Dr. W. L. Dickerson, of St. Louis.

### RESOLUTION ON UNETHICAL PREPARATIONS.

*Resolved*. That this Section (Section on Materia Medica and Therapeutics) desires to express its unequivocal disapproval of the use by members of this Association of proprietary preparations of unethical composition; and entirely approves the course of THE JOURNAL of the Association and of the Trustees in refusing to such pharmaceutical compounds the privilege of appearing in the advertising pages of THE JOURNAL. This Section expresses the hope that the Committee of Arrangements of the next meeting will exert sufficient vigilance over applications for space for exhibition to exclude all such unethical preparations and prevent their obtaining an apparent indorsement from the American Medical Association.

### RESOLUTIONS OF THANKS.

Dr. Dudley S. Reynolds, Louisville, offered the following:

We wish to move a vote of thanks: 1. To Dr. Wynn for the admirable, very interesting, pathologic exhibit. 2. To the ablest president under whose presidency I have sat within the past thirty years, many of whom were models almost of perfection, but not quite; we have had only one perfect president, and that is the gentleman who stands before us. 3. We wish to thank Dr. Philip Marvel and his collaborators on the Committee of Arrangements for the unprecedented and magnificent manner in which they have made provisions for our comfort and pleasure. 4. We wish to thank the press, which has been so generous in publishing our proceedings and so lenient in its criticism of our faults and shortcomings. 5. We wish to thank the ladies of Atlantic City for the grand and enchanting entertainments they have provided for our wives, our daughters, our sweethearts, our friends. 6. We wish to thank the Committee on Registration for the most excellent system, by which we were not delayed, or subjected to the inconvenience or tedium of lining up, as is too often the case. 7. We wish to thank the General Executive Committee for its faithful and patient discussion of all matters referred to it. 8. We wish to thank the chairman of the consolidated committee on Revision of the Constitution and By-Laws, Dr. Happel, for his faithful and painstaking labors. He denied himself both food and—drink. 9. We wish to thank Mr. Young, the owner of this matchless pier. 10. We wish to thank that distinguished, but modest, member of our fold, the editor of the Association journal. He has given us a model journal for all of the civilized world to imitate, if they can. (Applause.)

The resolutions were seconded by Dr. Love, and unanimously carried.

There being no further business to come before the general meeting, on motion, the Association then adjourned to meet at St. Paul, Minn., the first Tuesday in June, 1901.

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# Societies.

### COMING MEETINGS.

Indian Territory Medical Association, Wagoner, June 19-20.

Wisconsin State Medical Society, Milwaukee, June 20.

Third District Branch of the New York State Medical Association, Binghamton, N. Y., June 21.

Oregon State Medical Society, Portland, June 26-27.

Second District Branch of the New York State Medical Association, Schenectady, N. Y., June 28.

Michigan State Medical Society, Mackinac Island, July, 1900.

WARREN COUNTY MEDICAL SOCIETY.—This Society met in Phillipsburg, N. J., May 31. The following officers were elected for the ensuing year: president, Louis C. Osmun, Hackettstown; secretary, W. J. Burd, Belvidere; treasurer, W. H. McGee, Belvidere.

JACKSON COUNTY MEDICAL SOCIETY.—The annual meeting of this Society was held in Wellston, Ohio, May 31. The officers elected for the ensuing year were: president, B. F. Kitchen, Wellston; vice-president, J. L. Gahm, J [illegible]; secr[illegible], J. J. McClung, Glen Roy.

CAPE MAY COUNTY MEDICAL [illegible] the [illegible] eting of this Society, which was [illegible] C [illegible], the following officers were elected: president, A. L. Leach; vice-president, J. S. Douglass; secretary, C. B. Corson; treasurer, Randolph Marshall.

New Hampshire Medical Society.—The 100th anniversary meeting of this Society was held in Concord, May 31 and June 1. The election of officers resulted in the choice of the following: president, William T. Smith, Hanover; vice-president, D. S. Adams, Manchester; secretary, Granville P. Conn, Concord; treasurer, M. H. Felt, Hillsboro. Fifteen new members were added. The next meeting will be held in Concord, May 16 and 17, 1901.

Association of American Medical Colleges.—At a recent meeting of this Association, the following officers were elected for the ensuing year: president, A. R. Baker, Cleveland, Ohio: first vice-president, Thomas H. Hawkins, Denver, Colo.; second vice-president, W. H. Earles, Milwaukee, Wis.; secretary and treasurer, Bayard Holmes, Chicago; judicial council: Parks Ritchie, Minneapolis, Minn. (three years); W. W. Keen, Philadelphia (three years); J. M. Dodson, Chicago (two years).

Association of Military Surgeons of the United States.—This Association held its ninth annual session in New York City, May 31-June 2. Col. Chas. H. Alden, assistant surgeon-general, U. S. A., presided. The address of welcome was made by Major Albert Briggs, of the 65th New York Regiment. The following officers were elected: president, Brig.-Gen. A. J. Stone, Minnesota; first vice-president, Dr. John G. Wise, Washington, D. C.; second vice-president, Brid.-Gen. J. F. Calef, Connecticut; secretary, Col. Charles Adams, Illinois; treasures, Lieut. Herbert Arnold, Pennsylvania.

American Academy of Medicine.—The Academy held its meeting June 2, at Atlantic City, under the presidency of Dr. G. Hudson Makuen, Philadelphia. Several Fellows were elected and many interesting papers read and freely discussed. The following officers were elected for the ensuing year: president, S. D. Risley, Philadelphia; vice-presidents, C. M. Culver, Albany; Rosa Engelmann, Chicago; G. G. Groff, San Jaun; W. C. McClintock, Detroit; treasurer and secretary, Charles McIntire, Easton, Pa.; assistant secretary, Alexander Craig, Columbia, Pa. The selection of time and place of meeting was left to the Executive Council.

Thirteenth International Medical Congress.—According to instructions from Dr. A. Chauffard, Secretary-General of the Thirteenth International Medical Congress, no subscriptions to the Congress will be received after July 15, and no subscriber's name can appear in the official program unless his subscription is received before June 15. The publications of the Congress will consist of seventeen volumes, one of which will be sent gratuitously to each subscriber; that is, the volume containing the papers of the section under which he has inscribed himself. The other sixteen volumes may be purchased at a price of 4 francs per volume, or 45 francs for the series.

Wayne County Medical Society.—Physicians paid tribute to the memory of the late Dr. George E. Frothingham (The Journal, May 5, p. 1145), at a meeting of this Society, held in Detroit, June 3. Papers were read by Drs. E. B. Smith and J. J. Mulheron, and remarks were made by Drs. Irwin, A. N. Collins, J. E. Clark, Kenneth Gunsolus, W. C. Stevens E. W. Jenks, H. C. Wyman, J. C. Judson, G. G. Gordon, and L. E. Maire, all of whom spoke of the great nobility of character, the kindliness of heart, and the straight-forward, sterling integrity of the lamented physician. Several of the physicians spoke in favor of the society doing something toward a lasting memorial of Dr. Frothingham, and the idea will probably be taken up later on. No business was brought up, out of respect for the memory of the deceased.

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## Kentucky State Medical Society.

*Forty-fifth Annual Meeting, Georgetown, May 9-16, 1900.*

*(Concluded from page 1488.)*

President, Dr. William Bailey.

### EYE-STRAIN.

Dr. A. J. Blincoe, Bardstown, followed with a paper entitled "Some Facts and Fallacies in Regard to Eye-Strain." He stated that this condition is very general. The following conditions are traceable to it: headache, vertigo, constipation, dyspepsia, "bilious spells," sleeplessness, neuralgia, neurasthenia, cerebral hyperemia, chorea, epilepsy, insanity, anemia, general debility, and obscure nervous troubles.

### VISUAL PERIMETRY.

Dr. Dudley S. Reynolds, Louisville, read a paper on this subject, and said that it is important to measure the field of vision, as, if it is narrow, a person is in danger. He exhibited a perimeter made on an ordinary piece of cardboard sheeting, by use of which spinal injury could be found, and tobacco and alcoholic peripheral narrowing of the field of vision and color imperception; while there is a central lesion rather than a peripheral if color and not visual trouble is in the retina. In toxic amblyopia scotoma begins on the nasal side; if of central origin on the temporal side. Toxic amblyopia may be present and not discovered until a map of the field of vision is made. It is rarely absent in habitual users of tobacco.

### DIABETES MELLITUS.

Dr. Thomas Hunt Stucky read a paper on this subject, in which he reports six cases. Disturbance of metabolism is the chief cause, and is related to rheumatism and gout. Some cases that are temporary may be relieved by purgation and rest; but if more than 2 per cent. of sugar is present and there are other symptoms, there is reason to believe that it is a true diabetes mellitus. Restricted but wholesome diet, free from pastry; strychnia, with bromid of gold and arsenic; thorough emptying of the alimentary tract, nitroglycerin, five drops of bromid of gold and arsenic, pushed until the full physiologic effect is obtained, is better than arsenic alone, or chlorid of gold and soda alone, as it produces direct cerebrospinal stimulation, and is a cardiac stimulant, reconstructive and antimicrobic.

### AN X-RAY BURN.

Dr. I. N. Bloom exhibited a patient, showing an X-ray burn. He had been operated on for a gunshot wound of the abdomen, with perforation of intestine and stomach. The burn was produced after thirty minutes' exposure, with only the image of the Crookes' tube taken on plate. Five days afterward irritation began, and ten days after there was a bullous dermatitis, with great pain and sleeplessness. The patient became a victim of orthoform, but increased the dermatitis. Protonuclein, salicylic acid and diachylon, resinol and nosophen were used unsuccessfully; finally skin grafting was tried, with complete relief from pain four days afterward. The man gained flesh rapidly, and the burn practically healed.

### SCARLET FEVER.

Dr. Lyman Beecher Todd, Lexington, read a paper on this subject. He included in the management the general sanitation, sewerage, ventilation and quarantine; he mentioned as the period of caution, six weeks; and the three chemical agents in disinfection, carbolic acid, chlorid of lime and mercury. The second he considers the best and says, boil fabrics, use carbolic acid on furniture, and rub down the walls with bread, which should be burned afterward.

Dr. August Schachner, Louisville, read a paper entitled "Transplantation of Tendons for Correction of Paralytic Deformities." He stated that the first operation was done in 1881. The extent of the paralysis may be determined by electrical reaction; the preliminary step in forcible correction of the deformity is maintained some time; thorough disinfection, direct suture of tendons, if close; otherwise blunt tunneling, or implanting by a button-hole in the receiving tendon, coapting the sheath by catgut. The post-operative treatment is simple, but the immediate result is not an index of the final; tendoplasty is in the beginning of its usefulness, but must be used only in select cases.

### ALKALOIDAL MEDICATION.

Dr. Frank L. Lapsley, Paris, read a paper entitled "Alkaloidal Medication, What Is It? What Are Some of the Advantages?" He said that this phase of medicine is spreading rapidly, that granules contain the active principle of plants long in use; and that it has to recommend it, accuracy of dosage, certainty of effect, convenience in carrying, jugulating and cutting short disease, and no taste.

### APPENDICITIS.

Dr. A. Morgan Cartledge, Louisville, opened the symposium of papers on this subject with one entitled "Dangers of Operation for Appendicitis After Four Days and Before Quiescent Period." Of the patients who die, 90 per cent. have a fulminating type of disease in which case operation must be done in twenty-four hours after the attack. In fifty cases of general septic peritonitis, two have recovered without operation. There is no means of knowing the course in a given case. If purulent accumulation is walled off, wait until after the third day of attack; if there is rupture in the peritoneal cavity, operate at once. He has never seen abscess rupture in cavity but twice. A patient recovers from general suppurating peritonitis without operation as well as with it. An interval operation is indicated when there has been an unmistakable attack of appendicitis, but we must not operate too soon after a severe attack with adhesions. With light diet and little exercise the mortality from interval operations is one-half of 1 per cent.

### IMPORTANCE OF EARLY DIAGNOSIS IN APPENDICITIS.

Dr. Arch. Dixon, Henderson, said that diagnosis is not always easy, but many are clear; the temperature is variable, from normal to high. He should differentiate from colic, from indigestion, ovarian disease, pus tubes, extrauterine pregnancy, peritonitis from leaking pus tubes, and nephritis. Failure in diagnosis occurs when the initial symptoms are lost from the injudicious use of opium. Appendicitis is dangerous in all forms and stages.

### REPORT OF CASES OF APPENDICITIS.

Dr. W. A. Quinn, Henderson, read a paper entitled "Report of Seven Cases of Appendicitis with Remarks." He said it has no medical side in any phase, and that the laity and general profession are rallying to surgeons in their belief. It is attractive and satisfying surgery, and the results are pleasing. The operation of the present hour is the operation of the future.

Dr. J. G. Sherrill, Louisville, said that it sometimes can be handled in other ways than by surgery; that a slight inflammatory condition of the lining membrane may get well, but if there are three coats involved, abscess forms, and surgery is indicated, and that early diagnosis is of special advantage. Where appendicitis is suspected, opium should be avoided and hot or cold applications used. Typhoid fever may be confounded with tubercular peritonitis. The danger is increased after the fourth day.

Dr. August Schachner, Louisville, said that discussions on this subject are generally re-hashes, and important points lost. The pivotal point is a question of judgment; there is a time to go in and a time to stay out. Early operation should be a day or two from the onset, not from the diagnosis, which may be delayed a week, and the best time is very early, or in the quiescent period. Operation should not be as soon as diagnosis is made except when diagnosis is made early enough.

Dr. J. O. Jenkins, Newport, said that appendicitis may be operated on with some safety in the beginning, but if late, it is cruelty, if not murder. He believes in medical treatment, for in twenty-five years, he never had a patient operated on. The diagnosis is not always easy; there are generally two or three days of treatment for colic before the physician sees it.

### MUCOUS DISEASE.

Dr. Philip F. Barbour, Louisville, read a paper on this subject. He said that no pathologic lesions were discoverable, not even micro-organisms; that it may last a week or more; and show malnutrition, interval discharge of mucus, skin dry, brown discoloration, restless sleep, nausea or vomiting, capricious appetite, distended abdomen, change in disposition, scanty urine, abnormal tongue, sweet breath, pain in bowels, prostration and no fever. It is differentiated from tuberculosis by the jelly-like substance or worm, that looks like mucus. Inherited gout or uric acid tendency must be combated, and the formation of mucus checked; nitrogenous foods should be used, but no fats or carbohydrates; the patient should have good hygienic surroundings, and sea-salt bathing. Bitter tonics and small doses of bismuth should be given. The digestive agents are phosphate soda, hydrastis and sanguinaria, and arsenite of copper.

### HERNIA OF [illegible]

Dr. W. O. Roberts, Louisville, [illegible] viewed a case already reported in the *Louisville Monthly Journal*, which was the only case he had seen, although literature shows it is met with frequently. It may be intra-, para- or extra-peritoneal; the latter least common. If there is pain and tenderness radiating toward the bladder in irreducible hernia, diagnosis may be easy. Two pathognomonic signs are ability to distend through the bladder, and introduction of the curved sound. The diagnosis is not made in a majority of cases prior to the operation.

### CRETINISM.

Dr. David M. Gaddie, Hodgenville, calls this a rare form of idiocy, which is myxedema when it occurs in adult life. The degree of symptoms is dependent on the condition of the thyroid; climate, altitude, food, water have nothing to do with causation, though heredity plays a part. *Grafting of the thyroid gives relief.*

### RATIONAL THERAPEUTICS OF TYPHOID FEVER.

Dr. R. A. Bate, Louisville, presented a paper on this subject. He said that the clinical phenomena are due to toxins and not to bacilli; also that successful therapeutics must control toxemia; Nature produces enzymes. Thyroid antitoxin, as a prophylactic, renders susceptible individuals immune; other therapeutics rendered toxins less virulent. The therapeutic agents mentioned were the Brand bath, salicylates, nuclein group, calomel, light diet, and essential oils.

### VACCINATION.

Dr. J. C. Mosely, Henderson, read a paper entitled, "Vaccination Prior To, During and After Smallpox." He said that the active elements of vaccin are not known; isolation can not be relied on; only vaccination and re-vaccination, since it never loses its efficiency. Out of 200 cases previously vaccinated, in only five did the smallpox reach the pustular stage, though in one case it had been fifty-two years since the vaccination. Vaccinated after exposure, the smallpox will be very mild; vaccinated the day after the beginning of symptoms, both will proceed, but the smallpox will be much less severe, and the vaccination not modified.

Dr. B. W. Smook, Louisville, said that successful *vaccination* produces immunity against any kind of smallpox, and that the doctors are the *greatest trouble in enforcing sanitation and* compulsory vaccination.

### *OPIATES AND ETHICS.*

Dr. Barton W. Stone, Louisville, read a paper on this subject. He said that the abuse of opium leads *to reckless views of* life, that they who use it have little *remorse for crimes, that it* engenders mendacity, *dishonesty of speech and of action, weakening* of religious responsibility, *diminution in respect for age,* law, authority and conjugal relations, laziness, *self-indulgence,* conceit, *garrulousness, mischief-making, comparative imbecility* and shrewdness in *getting opiates for needs. The nervous system,* alimentary tract, *kidneys and liver lose their functions* until the sufferer's life *goes out. Cocain has the direst consequences, as those who use it earliest develop the paranoiac type* of insanity and the *effect persists for months after withdrawal.* Opium is for pain and *cocain to increase pleasures and stimulate* failing energy. *Doctors should try to stop the practice and* are culpable if they *ingraft the habit; if the patient is given* opium he should *be kept in ignorance of its use, for when once* well established the habit is *almost incurable. Smoking of opium is the least injurious form.*

### *GONORRHEA VS. SYPHILIS.*

Dr. W. R. Blue, Louisville, *presented a paper on this subject.* He mentioned the *popular view of the laity regarding the two* diseases, and said that *they look on gonorrhea lightly and collapse if told they* have syphilis. *Syphilis is relatively harmless; deaths from it comparatively nil; it kills its tens, while* gonorrhea kills its thousands. *Legislative enactments to prevent its spread are not effectual because not supported by the* public, but when they [illegible] *how* [illegible] *a scourge gonorrhea is,* [illegible] tion will be [illegible] *er matters under sani-* [illegible] *meat,* [illegible] *ing, etc. The doctors* [illegible] *r children. This ge-* [illegible] *can disguise* [illegible] *as well as*

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SATURDAY, JUNE 16, 1900.

## PRESENCE OF NUCLEATED RED CORPUSCLES IN THE CIRCULATING BLOOD IN MAN.

Nucleated red corpuscles were first found in the blood in cases of leukemia, after death, and subsequently also in the circulating blood. In other instances, however, they could not be demonstrated. Their presence was at one time believed to be indicative of medullary leukemia, and attributed to abnormal activity of the bone-marrow. As experience increased nucleated red corpuscles were found also in the blood in cases of pernicious anemia, and even in cases of secondary anemia, of varying intensity. It was then demonstrated experimentally that nucleated red blood-corpuscles occur in all diseases attended with rapid disorganization of the blood, and their presence must be looked on as indicating insufficiency of the blood-generating organs, which become incapable of neutralizing the increased loss with normal red cells. The presence of megaloblasts, with or without nuclei, bespeaks grave disturbance in hemogenesis. The explanation of the anemia secondary to leukemia is not clear. It has been thought that the hemorrhages that frequently occur or the leukemic process itself or perhaps some condition of the bone-marrow may be the causative factor. The presence of nucleated red corpuscles in the blood is not constant in cases of leukemia, nor even in the same case. This circumstance has been attributed to exhaustion of the regenerative power of the blood and to failure in the power of the heart.

Jünger,[1] who has made a careful study of the blood in ten cases of leukemia, states that nucleated red corpuscles can be detected in unstained preparations, though care must be taken not to mistake for them red corpuscles the seat of degenerative processes. The central nuclei of the former are surrounded by a peripheral zone of hemoglobin. The nucleated reds can be readily found, because they soon become detached from the rouleaux and lie free in the field. On several occasions changes in the position of the nucleus from the center to the periphery, as well as movement within the nuclei itself, were observed. Permanent stained preparations were made by exposing smeared cover-slips, dried in air and heated, to the action of .5 per cent. aqueous solution of eosin, for two or three minutes, next rinsing in water, then exposing to the action of a saturated watery solution of picric acid for twenty-four and then to the action of dilute solution of hematoxylin for from twelve to twenty-four hours. The specimen was then rinsed in water, dried in air and mounted in Canada balsam. Any excess of stain was removed by means of .25 or .5 per cent. hydrochloric-acid alcohol. Thus treated, the red blood-corpuscles appeared reddish brown, their nuclei deep blue, the protoplasm of the leucocytes in part brownish, in part rose-tinted. The granulations of the eosinophile cells were distinctly visible. The network of chromatin filaments appeared sharply defined.

The largest number of nucleated reds found were normoblasts of variable size. Microblasts were less common and megaloblasts more numerous. Generally a single nucleus was present; often, however, there were several and in some even as many as four free nuclei. As a rule, the nuclei were round, but not rarely oval. The nuclei of the megaloblasts were generally oval and rather large, occupying almost three-quarters of the cell. While the nuclei of the normoblasts and the microblasts stained deeply, those of the megaloblasts stained more feebly. The nuclei were in part excentric and in part central. When the nucleated red blood-corpuscles were present in small numbers, the nuclei exhibited no peculiarity, being round and uniformly and deeply stained. If, however, the nucleated red cells were more numerous, the nuclei not rarely presented other shapes and even mitosis in all stages. It is established that red blood-corpuscles are formed by mitotic division of nucleated young cells in bone-marrow, although it has not been definitely determined that the nucleated reds originate here. The taking up of hemoglobin during mitosis, by cells previously free from hemoglobin, was not observed.

All stages of cell division occurred in red blood-corpuscles presenting the same tint and shape as non-nucleated red corpuscles, and in no instance were any structures found that could even approximately be considered transitional forms between white and red corpuscles. Karyokinetic red corpuscles could be most sharply differentiated from karyokinetic leucocytes. The karyokinetic figures of the former stained much more deeply with hematoxylin than those of the leucocytes; the cell-body appeared more delicate and fragile and the entire cell more plastic than that of the karyokinetic leucocyte. The nuclei of red corpuscles passing from kinesis to the resting stage, and which in turn undergo division, presented a typical appearance. They were large, at times occupying half the body of the blood-corpuscles, with a delicate nuclear membrane, which appeared thickened only in places from which chromatin filaments passed off. Within the nucleus was contained a rather loose, irregular network of delicate chromatin filaments. Similar thickenings were present at the points of intersection, as on the membrane, and they were often continued to other points of intersection, so that uniformly broad bands appeared woven into the delicate network. Such bands often seemed to be coherent filaments. Megaloblasts generally presented, in their usually oval, large nuclei, a closer network of chromatin filaments, but otherwise the conditions were the same as in the nuclei of normoblasts.

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[1] Deutches Archiv f. Klin. Med., B. lxvii, H. 1 u. 2, p. 109.

In the process of multiplication of the chromatic substance preceding cell-division the individual filaments of the close network become thickened, and enlargements appear at the periphery of the nucleus and at individual points of intersection. Further on, the delicate filaments of the dense convolution become shortened and thickened and collected in loops. These become rearranged and form the mother aster. The stage of metakinesis was observed but once, while all subsequent ones were more common. In the stage of daughter asters the two halves of the nucleus were almost always more deeply stained than in the preceding one of karyokinesis. At times these halves were traversed by a number of dark filaments extending into the interior of the cell. The individual nuclear segments presented a concavity toward the pole, and a convexity toward the center of the cell. Often, however, the segments were irregular in shape, with a few short processes on the central aspect, while the remaining border was partly smooth and partly serrated.

The various stages of cell division described were observed in red corpuscles not larger than normal, but not in megaloblasts, although these were present in considerable number, and the division has been described by others. The impression was gained that karyokinesis of the nucleated red corpuscles occurs in the circulating blood without especial peculiarity. Although opinions differ as to the fate of the nuclei after having passed from the state of kinesis to the resting one, it is agreed that the nuclei that do not undergo division gradually lose the trabecular arrangement of their chromatin filaments. These move closer together and the nucleus becomes smaller and stains more deeply. Often lighter and darker areas are distinguishable in the nucleus, and, particularly at the periphery, deeply stained short or long bands, frequently with a radiate arrangement, stand out distinctly, until eventually these also disappear and finally the nucleus presents the appearance of a uniformly and deeply stained mass. The nucleus now exhibits a marked tendency to undergo all sorts of changes in shape, being at times round, at other times oval and at still others constricted in several places. Occasionally small portions of the mother nucleus become detached or the nucleus breaks up into two, three, four or even more small segments, which frequently cohere. In many blood-corpuscles the nucleus was wholly peripheral, with one-half already outside. In others, one segment was outside, others appearing to remain behind or to be about to follow. At times the individual segments seemed bound together, at times separated.

The polynuclear red blood-corpuscles have been considered pathologic, but they have been found in human embryos and have been thought to represent a normal phase in the development of non-nucleated red corpuscles. Free nuclei were found rather frequently, and they have again been observed to become surrounded by protoplasm and to imbibe hemoglobin and thus to form new nucleated red corpuscles. It is possible, however, that these appearances are due to artefacts. It has further been held that the nuclei undergo absorption within the body of the cell.

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## DENTAL EDUCATION.

Medical educators will be deeply interested in the symposium on dental education, presented before the Section on Stomatology at the Atlantic City meeting of the AMERICAN MEDICAL ASSOCIATION. This symposium deals with every phase of the subject. The paper by Dr. N. S. Davis[1] has especial interest, and that the views therein, which were advanced more than four decades ago, are of more value to-day than when first expressed is shown in later discussion of the same topic by others. On perusal of these papers, it will be generally admitted that advanced education is necessary for the successful practitioner of stomatology at the present time, which is gaining ground among dentists, and the term for their science is an evidence of the advanced conception, held to-day by many dental societies, of the status of dentistry as a specialty of medicine. The dentist, as shown by this term, has ceased to be a mere tooth carpenter and become a medical scientist; dental science has brought diseases of the mouth, jaws and teeth so obviously under the domain of general pathology that somatic problems elsewhere presented in the body are best and easiest studied in the mouth. This is particularly true of teratology, embryology, excessive and arrested development, especially as related to race advance and degeneracy, as has been shown by Talbot. Factors of acquired degeneracy, like the drug habit, mercurialization, etc., neurotrophic and diathetic states have nearly all their pathologic phases outlined in the disease interstitial gingivitis (Talbot).

To enable the dental student to successfully treat these lesions, he should have a broad training in the fundamental branches in medicine, such as anatomy, physiology, pathology, bacteriology, materia medica and chemistry. It will not do to teach these sciences in a dental school, even by the same teachers, because the student acquires the idea that they are not necessary to a successful practitioner of dentistry. Dentistry, as practiced to-day by the better practitioners, is a part of general medicine. The same requirements should be exacted for the entrance of the dental student as for the medical. They should be taught in the same class and in the same manner. The final examinations should be as exacting for one as the other, and no distinction should be made between them. The extension of the course from three years to four of nine months each will give ample time to equip the dental student. In these days of trusts for the purpose of reducing expenses there is no reason why universities and medical schools should not reduce expenses.

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[1] THE JOURNAL, p. 1519.

There are forty-six dental colleges recognized by the National Board of Dental Faculties and state boards of dental examiners. Twenty of these are connected with universities, eleven with medical colleges and the remainder are independent. It is therefore a very easy matter to reorganize the teaching methods of these college faculties along lines advanced by Dr. Davis. The others would wisely follow. The technique in most of our dental schools is nearly perfect from the standpoint of the narrow lines on which dentistry has been taught in the past sixty years.

Chairs on stomatology should be a part of every medical faculty. Through the instrumentality of Dr. Davis, chairs on dental and oral surgery were added to every medical school in Chicago, in 1880. Instruction has been given to medical students each year, and no medical college can do justice to its graduates without such a course. Universities should bring their dental departments up to as high a grade as the other departments of learning. This can best be done by making stomatology as necessary a part of medical education as is general surgery or ophthalmology.

The object of these papers is to impress on both medical and dental teachers the necessity of a broader education for medical and dental graduates.

## ARTIFICIAL SERUM SUBSTITUTES.

Blachstein[1] emphasizes that the phenomena of agglutination are valuable in other ways than shown in serodiagnosis. We are enabled by agglutination, to detect special disinfectants—"agglutino-disinfectants"—that may conveniently replace bactericidal serums, and thus prove to be true serum substitutes. Impressed from the first that agglutination is a chemical process, the idea seemed plausible to Blachstein that other substances besides pure serums might produce agglutination. In 1896 Blachstein showed that a dilute solution of chrysoidin has the power to agglutinate cholera vibrios, the reaction being quite diagnostic and associated with destruction of the vibrios, so that chrysoidin could be used as a practical and efficient disinfectant and preventive of cholera. These statements gave rise to much discussion among bacteriologists, and dissenting opinions were freely expressed. Some claimed that certain races of cholera vibrios are agglutinated by a dilute solution of chrysoidin while others are not. Blachstein now states that all the various races are agglutinated by chrysoidin provided they have been planted on neutral media. The fact that vibrios grown on alkaline media do not give the chrysoidin reaction is explained by the assimilation of alkali, which is given up again in the distilled water in which the emulsion is made; and any alkaline body renders chrysoidin inactive. It seems probable that virulent vibrios are more tenacious of alkali than vibrios grown for a time on alkaline media. Hence the contention by some that virulent vibrios do not give the chrysoidin reaction. Blachstein claims that bacteria that, planted on neutral media, do not show the chrysoidin reaction are not cholera vibrios; the only exception being the historic Finkler-Prior vibrio, which reacts positively both when grown on alkaline and on neutral soils, being apparently unable to assimilate alkali. Engels has pointed out that malachite-green and safranin are also cholera agglutino-disinfectants; they are, however, poisonous substances. Chrysoidin, malachite-green and safranin are all basophile substances, but only those basophile substances are cholera-agglutinins that contain a $C_6H_5$ group. Chrysoidin is a disinfectant and agglutinin down to a dilution of 1 to 10,000 of distilled water; greater dilutions. as 1 to 20,000, produce agglutination but no destruction of the vibrios. This indicates that the limits of disinfection and agglutination do not coincide.

The possible practical outcome of these interesting observations is found in the following statement from Blachstein: "If I had again the privilege of witnessing a cholera epidemic, I should recommend a chrysoidin solution (1: 1000) to be taken internally in doses of 20-50 c.c. This would serve to disinfect the mouth, the upper part of pharynx and stomach, if there should be an accidental infection." He suggests that it could also be used to sterilize fruit, vegetables, and water, and could be added to charcoal filters.

The fact that we have in chrysoidin a test for cholera vibrios that surpasses the serum test in scientific accuracy and practical applicability, chrysoidin being a chemical body of absolute purity, readily dissolved in standard solutions, must be regarded as an important step toward securing efficient serum substitutes. Malvoz has taken up the study of artificial typhoid agglutinins, and every one recognizes at once the great importance of having efficient typhoid agglutino-disinfectants. If agglutination is a purely chemical process, it seems plausible to expect that such substances may be found for many pathogenic germs.

## A HOPEFUL DECISION.

A Wisconsin police magistrate recently fined two "Christian Science" healers for illegal practice of medicine. The usual defense, that their methods did not constitute the practice of medicine, did not succeed with the judge, who held that any kind of treatment of the sick for a fee comes under the provisions of the law; that when "Christian Science," which as a religious belief is entitled to toleration, undertakes to treat the sick it should do so under the sanction and conditions of the law, and failing this, its practitioners are liable to its penalties. The decision will probably be appealed and may go to the supreme court and become a leading case. If that should occur, we have no doubt that the opportunity to ventilate the methods of this delusion will be fully improved and we trust the higher Wisconsin court will follow the same course as has this police magistrate.

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[1] Serum Substitutes, with Especial Reference to Asiatic Cholera. Contributions to the Science of Medicine by Pupils of W. H. Welch, pp. 890-901.

### GASTRIC HEMORRHAGE.

The subject of gastric hemorrhage in its various forms is thoroughly discussed by Dr. Rodman in his Oration on Surgery, printed in this week's JOURNAL. He favors early rather than late operative interference in case of gastric hemorrhage from ulceration, save in the acute cases and first hemorrhages, the uncertainty of diagnosis being in itself a strong argument for this course in many cases. When all medical measures have been tried and have failed, he believes better results will follow operation than the policy of inaction usually adopted, and if there is gastrectasis he holds that the indication is absolute. This is the surgical point of view, and it may be that many physicians will still hesitate to recommend such formidable operations as pylorectomy or partial gastrectomy when there remains any hope whatever from delay. Dr. Rodman expressly repudiates advocacy of any general or universal resort to surgery, and the difference of opinion is after all only one of degree; nearly all would advise operation as a last resort. The chances for surgical success in cirrhotic hemorrhage are, he admits, less promising than in the case of ulcer, but he still believes that in these cases also, within proper limitations, surgical intervention may be properly considered. Considering the frequent difficulty of diagnosis between these two etiologic factors, it would be less fortunate if in one of them operation was absolutely contraindicated. A popular notion, that of vicarious gastric menstruation, is not supported, even if not exploded, by his researches, and the accident of postoperative hematemesis is also shown to be a surgical rarity, though Rodman does not question its occasional occurrence in septic states of the blood. The address as a whole gives an excellent statement of advanced surgical opinion on this subject of the treatment of gastric hemorrhage, and the views expressed are in the main those best supported by statistics and the authority of such surgeons as Mayo Robson and others who have recently written on the subject.

### THE TUBERCULIN TEST.

A recent occurrence in an eastern state has been made a text for some anti serumtherapeutists. A veterinary surgeon, in using the tuberculin test on a calf, accidently pricked himself and developed tuberculosis, which caused his death six months later. It is quite possible, as has been suggested, that he had already unconsciously contracted the disease and the involuntary inoculation only revealed it, but it is also possible that it awakened it into the excessive activity that produced the rapidly progressing disease. This latter possibility, while it is practically denied by some authorities, is nevertheless one that deserves serious consideration, and the conservative position of Dr. Knopf on the subject of the tuberculin test in the human subject is, on the whole, the safest to follow. When a man has only latent tuberculosis—some old practically isolated focus—and is in apparent normal health, it may well be that there is no advantage in stirring it up, if by so doing any risk is taken. He is not, in that condition, a public danger and may never be—his ignorance is bliss to him and it is folly to make him wise. There are other diagnostic methods that meet all needed requirements and are beyond the suspicion of any danger to the individual, though less rapid and more laborious for the diagnostician. The suggestion, credited to a distinguished New York authority, that the individual resistance in this case was probably already unconsciously weakened, does not materially affect the case; if a diagnostic method can produce such effects on a weakened system, it had better not be used. The case, if correctly reported, furnishes a strong argument against any general application of the tuberculin test for diagnostic purposes on human subjects. It is well enough for cattle, but while generally harmless in man, there are at least one or two other cases on record of troublesome results from its use.

### PECULIAR STATUS OF NEBRASKA MEDICAL LAW.

A recent decision of the Supreme Court of Nebraska practically annuls an important feature of the medical registration law of that state, and is the result of a rather curious state of affairs. The constitution of Nebraska prohibits special state boards, and to get around this the legislature constitutes them out of holders of legalized existing offices. The State Board of Health therefore is made up of the governor, the attorney-general, the superintendent of public instruction and the treasurer. The real duties of this board are carried out by medical secretaries who have, however, only a deputized authority. One Dr. Drasky applied for a certificate to practice, but was refused by the board of secretaries on the ground that his diploma had not met the conditions of the law in being the outcome of a four years' course. He appealed to the official board of politicians, who told the "secretaries" to grant him the certificate, and at that point a local medical college interfered and obtained an injunction against the Board so doing. Appeal was carried to the supreme court and the injunction was dissolved: the judge, in reversing the decision held that the law governing the practice of medicine was a police measure and not an act to protect medical schools or practitioners from competition. An incorporated college can not, therefore, maintain an action to restrain the State Board of Health from issuing a certificate, and an injunction will not lie to annul its decision after it has placed its construction on the law. This seems to leave the matter, as far as any possibility of correcting matters by injunction is concerned, entirely in the hands of the State Board. The question arises: what remedy would there be if they should choose to put an absolutely nugatory construction on the law? and also whether the judges' decision would have been any different had there been no chance for an inference of self-interest on the part of the persons asking for the injunction. As the case now stands, medical registration in Nebraska is in the hands of non-medical elective officers whose sense of their responsibilities is evidenced by their nullification of an important clause in the law, and, according to the supreme court, there is no appeal.

### TEXAS AND "DIPLOMA MILLS."

A Texas diploma mill, calling itself the "New York Medical College," was organized and incorporated last November and has just been permanently closed by the state authorities. It appears to have been the project of an enterprising firm composed of a man and his wife, who associated with themselves certain other individuals —or at least their names—and proceeded to make M. D.'s, after the approved Armstrong & Co. (Chicago) method. The following letter is one included in the petition for injunction by the attorney-general, and is interesting evidence of the educational and literary qualifications of the corporation:

San Antonio, Texas, March 6, 1900.

*Dr. G. V. Westgate:*

Dear Doctor:—Enclosed find Literature as per request. As to legality of our Institution See the article by Ogden & Terrell of this city our attorneys.

If you are practicing We are permitted to decorate you Without you attending school, providing you fill out Blanks sent you satisfactory. if you desire to do so send 1/2 fee and Blanks filled O. K. if O. K. we will send Diploma C. O. D. for Bal.

N. Y. M. C. 201 Ave. C.

How many would-be M. D.'s have been "decorated" by this concern in its brief but enterprising career is unknown to us, but Texas appears to have been a good field for the Chicago bogus diploma dealers. According to an editorial in the *Texas Medical News*, from which journal we take the above facts, there were registered in Tarrant County, Texas, alone, 26 diplomas from Chicago's "Independent Medical College," out of a total of 41 in 1898, 115 out of 149 in 1899, besides 14 from the "Metropolitan Medical College"—now in trouble[1]—and 2 from the "International Health University." From Jan. 1 till April 12, 1900, there were 29 diplomas registered altogether, and of these 20 were from the Metropolitan and 2 from the "Independent Medical College." The medical laws of Texas have surely been lax in the past, but the authorities have certainly shown a commendable promptitude in nipping early, if not exactly in the bud, this Texas imitator of Armstrong and Buchanan.

### COMPULSORY NOTIFICATION OF TUBERCULOSIS.

According to the newspaper reports, Boston is undertaking to treat tuberculosis as a notifiable contagious disease and to exercise a more rigid sanitary control over it, with a view to diminishing if possible its excessive mortality in that city. The question of the advisability of such a measure as compulsory notification of this disease has been long discussed and the medical profession is far from being a unit in its favor. We may admit that consumption is contagious and yet believe that notification should not be made compulsory, for obvious reasons, and it will be of interest to see how fully and willingly the Boston physicians will assist in the experiment to be tried there. Its success will be largely in their hands, for it will be difficult to enforce the rule without their hearty co-operation. If this be lacking, and it seems very possible that the notification may not be quite universal, the results may not be altogether as instructive and effective as is anticipated. One thing, however, should be done—the general public should be educated to understand that the notification in tuberculosis does not mean all that it does in the case of smallpox or diphtheria, and that there is no necessary peril in casual contact with a consumptive. At present we are perhaps creating an unreasonable fear of the disease in many naturally pathophobic individuals, that leads, as Dr. Bowditch and others have shown, to actual inhumanity. For this reason, compulsory notification might in some cases add seriously to the hardships of those already afflicted, without really any justification for it. There is one unobjectionable feature, however, of the Boston proposition, viz.: the disinfection of premises after deaths from tuberculosis. This feature could easily be adopted elsewhere, when the other one of compulsory notification of cases in the living is not deemed as yet expedient. In the meantime, there are many unfortunates who will be thankful that they do not live in Boston.

### SURGICAL RELATIONS OF THE BACTERIOLOGY OF THE UPPER PORTION OF THE ALIMENTARY CANAL.

The relations of the bacterial flora of the various parts of the intestinal canal to the consequences of traumatic and pathologic perforative lesions of the stomach and bowel have probably not received the attention that the importance of the subject merits. A good beginning has been made by the recent study of Cushing and Livingood.[1] As the result of experimental investigation and study of suitable clinical material, they find that in the upper part of the intestine the bacteria are more scanty than in the lower portion. The varieties of bacteria present are not definite or constant, inasmuch as the character of the food taken into the stomach plays a signal part in determining the kind and number of organisms present at a given time. The germicidal action of the gastric juice is rather limited and some bacteria, such as streptococci, escape its action more readily than others. During the latter part of digestion and after fasting, the investigators mentioned found it difficult to recover microbes from the mucous membrane of the stomach, duodenum, and even of the jejunum as far down as the canal was completely emptied. From this follows the important practical deduction that it is of great value, before operating on these parts, to rid food of micro-organisms as far as possible, by thorough sterilization and also to render the upper part of the digestive tract empty. Peritonitis following intestinal wounds assumes its special characteristics from the bacteria in the canal at the site of the lesion. Scanty and relatively harmless bacteria naturally favor the prognosis of such conditions. There is surely much to be done for the patient by following the indications mentioned; and further studies will undoubtedly bring to light many important details in the relations of the bacteriology of food and of the intestinal contents to the consequences of intestinal lesions, operative or accidental. It is probable that too little attention has been given to the nature of food as regards the bactericidal content, and also to the condition of the mouth, in the preparation for severe operation on the stomach and adjacent parts of the digestive canal.

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[1] See last week's Journal p. 1497.

[1] Contributions to the Science of Medicine by Pupils of William H. Welch, 1900, 543.

### EXPERIMENTAL CIRRHOSIS OF LIVER.

The etiology of cirrhosis of the liver still presents many obscure points. Investigators have endeavored to experimentally produce cirrhosis of the liver in animals, but so far the success has been rather indifferent. It is true that certain chemical and toxic substances have been found to induce cirrhotic processes in the livers of animals, but it does not seem that any method has yet been devised that will reproduce at will, in any degree of completeness, the various changes observed in human cirrhosis. Injurious agents that act acutely and severely on the liver do not necessarily result in consecutive connective-tissue proliferation, because the liver has power in a high degree to regenerate after necrosis and degeneration. The general opinion is that cirrhosis develops from the action of substances that operate in a chronic manner and in some way induce the growth of fibrous tissue. The peculiarities of the tissues of the individual undoubtedly play their part in the genesis of cirrhotic changes in animals as well as in man. All observations throwing light on the development of cirrhosis of the liver are welcome. Weaver's recent study[1] of cirrhosis of the liver in the guinea-pig, produced by a bacillus and its products, is very suggestive of what may also occur in man. The bacillus appears to belong to the colon group. It was isolated from a guinea-pig that died spontaneously. Unfortunately, the organism early lost its virulence, but enough experiments were made to show the connection between the necrotic and proliferative changes. The lesions were produced equally well by inoculation of living cultures and devitalized ones. In the animals dying early, degenerative changes only were present in the liver; at a later period, connective-tissue proliferation was associated with necrosis; and in still further advanced stages, cirrhosis had entirely replaced the degenerative changes. These effects were obtained only in guinea-pigs, showing the influence of species. It would be of great interest in studies of this kind if animals could be kept alive for some time after connective-tissue growth had been induced, in order to observe the further course of the hepatic changes.

### ETIOLOGY OF SCURVY.

It is fortunate that scurvy is much less common than it once was, although every now and then outbreaks occur, and sometimes under circumstances amid which the disease would ordinarily not be expected. That the disorder is a dietetic one there seems no reason to doubt. It has for a long time been thought to be dependent on an absence from the food of some substance, or substances, contained in fresh vegetables and fruits, and, accordingly, lime-juice has been recommended and extensively employed for its prophylaxis. The disease has also been attributed to deficient ventilation. Recent observation, however, has shown, on the one hand, that scurvy may occur despite the use of fresh vegetables or lime-juice and the provision of adequate ventilation, and on the other hand, that it may fail to develop under the reverse conditions; so that it is necessary to seek for other influences to explain its occurrence. An exceedingly interesting and painstaking investigation by Jackson and Harley[1] is calculated to contribute to this end. From personal experience, and from the observation of others, Jackson came to the conclusion that the development of scurvy is attributable to the use of tainted animal food, and its prevention can be secured by the use of wholesome meat. In order to confirm or correct this opinion, feeding-experiments were undertaken with three groups of monkeys, to one of which rice and freshly opened tinned meat and maize were administered; to the second the same, except that the meat had been permitted to become tainted; and to the third the same as the second, except for the addition of an apple or a banana. While diarrhea and loss of weight occurred in all of the animals in the first group, there was an absence of blood and mucus from the stools and of sponginess of the gums, such as were present in the other two groups of cases. A comparison of the blood from two of the monkeys in which the symptoms of scurvy appeared with the blood from a healthy monkey, showed the number of red corpuscles decreased in the former, the number of leucocytes greatly increased, the percentage of hemoglobin diminished, the specific gravity lowered, the water increased, the solids and the proteids diminished, the fibrin increased, the coagulation-time and the amount of nitrogen diminished and rash increased. Accepting the symptoms developed as evidence of the existence of scurvy, it would seem demonstrated that this disease may occur from using tainted meat, in spite of the administration of fresh vegetables, and that the absence of the latter is alone not sufficient to cause the development of the disease. An explanation is wanting, however, for the cases in which scurvy appears when meat is not taken in any form, and for those found in children. On the other hand, some confirmation is indirectly given to the view here expounded, by the fact that meat-juice has been found useful therapeutically under the conditions last named.

### PRESIDENT-ELECT C. A. L. REED, A.M., M.D.

Charles A. L. Reed, A.M., M.D., of Cincinnati, the president-elect, although a comparatively young man, has been a conspicuous member of the AMERICAN MEDICAL ASSOCIATION for a number of years. In 1891 he was Chairman of the Section on Obstetrics and Diseases of Women, and at the time of his election to the presidency he was serving his second term as a member of the Board of Trustees, in both of which capacities he exercised vigilance and industry in promoting the welfare of the Association.

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[1] Contributions to the Science of Medicine by Pupils of William H. Welch, 1900, pp. 297-305.

[1] The Lancet, April 28, p. 1184.

Dr. Reed was born in 1856, the second son of Dr. Richard Cumming Stockton Reed and Nancy (Clark) Reed. He was educated in the schools of Ohio and holds the degree in arts from Miami University, Oxford. His medical education was received in the Cincinnati College of Medicine and Surgery, in which institution his father held the professorship of materia medica and therapeutics for more than twenty-five years. After his graduation he engaged in general practice and began medical teaching soon after he received the doctorate. He lectured in his *alma mater*, first on pathology, and later (1882) was called to the chair of obstetrics and diseases of women. A few years later the chair was divided, when he became the professor of gynecology and abdominal surgery, a position from which he resigned after fifteen years of labor and after having occupied the deanship for four years. In 1892 Dr. Reed was elected a member of the Board of Directors of the University of Cincinnati, an office which he now occupies. In this connection one of his chief labors was in promoting the establishment of the medical department, the articles creating this having been formulated and written by him. That he might devote himself with singleness of purpose, to the further development of interests connected with the university, Dr. Reed withdrew from all other college affiliations.

PRESIDENT-ELECT C. A. L. REED, M.D.

In 1897 Dr. Reed succeeded Dr. T. A. Reamy as gynecologist to, and clinical lecturer on diseases of women at, the Cincinnati Hospital, which is affiliated with the university as its clinical and pathologic school. In 1896 he was invited by Governor Bushnell to become a member of the Ohio State Board of Medical Registration and Examination, a position which he accepted, but which he resigned after two years, in response to the exactions of his private practice.

In 1885 he determined to devote his energies to the practice of abdominal and pelvic surgery, and with this end in view he became the pupil of the late Mr. Lawson Tait, of Birmingham, England. He also extended his observations in other hospitals of Europe and America, and has since devoted himself exclusively to this department of practice.

The Doctor has been largely interested in promoting the organization of the medical profession. This was especially exemplified in his work in connection with the Pan-American Medical Congress, a movement, of which, by virtue of his initiative and effective organization, he has been justly recognized as the founder. This congress, as is well known, embraces all the countries and colonies of the Western Hemisphere, and has already borne excellent results, not only in effecting an interchange of scientific thought, but in establishing an *entente cordiale* between the English and Latin-speaking members of the profession in the Americas. It has been his hope, as has been expressed in resolutions previously presented by him to the American Medical Association, and as reiterated in his presentation remarks at Atlantic City, to see the membership of the Association embrace the entire English-speaking medical profession of North America. Dr. Reed is one of the founders of the International Periodical Congress of Obstetrics and Gynecology, at the third biennial reunion of which, at Amsterdam, in 1899, he was one of the honorary presidents for the United States. He is also one of the founders of the American Association of Obstetricians and Gynecologists, of which he was the president in 1898. He is at present the president of the Cincinnati Obstetrical Society and is a member of several local and foreign medical societies.

Dr. Reed has contributed numerous papers to the current literature of the profession, and eastern publishers now have in press a text-book on gynecology, of which he is the editor.

## Medical News.

Cholera threatens to be severe in Bombay this summer.

The invalided soldiers sent home from South Africa will be paid and medically treated until they are discharged, their families receiving the ordinary allowances.

The committee charged with the organization of a collective investigation of cancer in Germany is now fully formed. Professors von Leyden and Kirchner are the presidents, and Dr. George Meyer is the secretary.

A day resort for pulmonary invalids has been opened on the outskirts of Berlin, with facilities for reclining, for warming lunches and obtaining inexpensive wholesome refreshments. It is under the charge of a physician, and a pavilion with four beds is ready in case of emergencies.

New Army Stretcher.—Dr. Chavernac, of Aix, France, has designed a new army stretcher which possesses two chief advantages over the stretchers now in use; namely, the wounded man can be lifted from the ground without shock or pain, and he is not touched by the bearers while this is being done. The stretcher is rigid and is made in halves, which, by pressure, fold together under the body of the patient. When loaded, the stretcher is mounted on a light bicycle carriage. It requires only two bearers, as compared with four for the stretchers now employed.

Progress of the Plague.—During the week ending May 10, 1771 deaths occurred from plague in India, as compared with 2498 during the previous week. This encouraging decline has occurred in a fairly equal way in all the affected districts. The plague mortality is diminishing more rapidly than the general mortality. The present epidemic is the fourth that has visited Bombay since 1896. It has lasted over 200 days and is responsible for over 50,000 deaths in the presidency. While the death-rate is abating, it is still higher than at any corresponding period. In Calcutta the mortality is still quite high, there being 252 deaths from the plague during the week ending May 10, while in Mysore province the epidemic has practically disappeared. The plague at Aden is a serious check to trade, as steamers call there for many other places besides those bound to or from India. In Hongkong it is feared that the plague may again become epidemic, as the number of cases is daily increasing. In Swatow and the hinterland of the Kwang-tung province the plague still prevails. At one city, Chow-Yang, seven miles from Swatow, the plague carried off 40,000 people during 1899. At Sydney the epidemic is declining and at no other of the Australian ports is the disease spreading.

## PENNSYLVANIA.

### Philadelphia.

Dr. Daniel Hughes will spend the summer in Europe.

Dr. Wharton Sinkler will spend the summer at Wyncote.

Dr. J. William White will sail for Europe, June 21. He will return in September.

Dr. John V. Shoemaker has been appointed a member of the Board of Charities and Correction, to succeed Alfred Moore, who recently resigned.

The British ship *Bessie Markham*, from Buenos Ayres with a cargo of bones, has been detained at the Reedy Island Quarantine Station. On May 26 the captain of the vessel died, and it is feared that death may have been due to the plague.

An epidemic of measles has broken out among the pupils attending the Bridesburg School, and in one department sixty have the disease. The school may be closed on this account.

On June 11 the Board of Health began its annual inspection of manufacturing plants and other houses, to determine their sanitary condition. The work began along the Delaware River front and extended northward. Nuisances found were ordered abated.

The one hundred and forty-fourth annual commencement of the departments of medicine, dentistry, arts, science, law, and veterinary medicine of the University of Pennsylvania, occurred on June 12. In connection with the annual meeting of the college alumni there was a presentation of a portrait of Dr. William Pepper.

#### DANGEROUS TOY.

A dangerous plaything has been placed on the market in the shape of a marble coated with phosphorus, which, when thrown on a hard surface, produces a loud noise. Chief C[illegible]ist Robinson has made an examination and stat[illegible]ing is composed of phosphorus, chlorate of potash and sugar. Orders have been issued for the arrest of persons selling these toys.

#### MORTALITY STATISTICS.

The number of deaths occurring in the city for the week ending June 9 was 409, a decrease of 10 over that of last week, and a decrease of 69 over the corresponding period of last year. The principal causes of death were: apoplexy, 9; nephritis, 42; cancer, 17; tuberculosis, 41; diabetes, 1; heart disease, 36; influenza, 1; pneumonia, 41; suicide, 3.

#### EMERGENCY HOSPITAL.

The Philadelphia Emergency Medical Corps, which was organized some time ago for the purpose of relieving those who might suffer accidents during parades or public functions, is making extensive preparations for the accidents which may occur during the Republican National Convention. Members of this corps are to be distinguished by badges worn on the coat. A temporary hospital has been arranged.

#### RECEPTION TO PHYSICIANS.

The Philadelphia Medical Club tendered a reception, at the Hotel Bellevue, to a number of visiting physicians from various parts of the United States on the evening of June 9. Among the number present were: Drs. Abraham Jacobi, New York City; Alonzo Garcelon, Lewiston, Me.; George H. Simmons, Chicago; James M. Bodine, Louisville, Ky., and Frank Billings, Chicago. The reception followed a dinner, given at the Union League Club by Dr. James M. Anders of the Medico-Chirurgical College.

## MARYLAND.

### Baltimore.

Dr. Wm. S. Halsted sailed for Bremen, June 7.

Dr. Francis T. Miller and wife, and their son, Dr. L. W. Miller, left for Europe, June 9.

Dr. John Morris has retired from the practice of medicine, owing to ill-health and age.

There were 152 deaths in this city last week, 15 being from pneumonia. The death-rate per 1000 is 14.61, viz., whites, 12.58; colored, 26.66.

The annual report of the Nursery and Child's Hospital shows that there were 228 children admitted during the year. The general receipts were $8,916.78 and the expenses were $4,900.63.

About twenty-five physicians from here will go to Paris this summer, to attend the International Congress. Among them will be Drs. Osler, Jacobs, Hemmeter and Cullen.

#### COLLEGE OF PHYSICIANS AND SURGEONS.

At this institution the following changes have been made: Dr. C. Hampson Jones is transferred from the chair of obstetrics to that of clinical medicine and hygiene; Dr. Geo. W. Dobbin, appointed professor of obstetrics; Dr. Cary B. Gamble, associate professor of clinical medicine; Dr. W. F. Smith, associate professor of surgical anatomy; Drs. Archibald C. Harrison, Samuel Butler Grimes, and S. Griffith Davis, demonstrators of anatomy; Dr. Glen M. Litsinger, demonstrator of obstetrics; Dr. Lybran Rosenheim, demonstrator of bacteriology.

## ILLINOIS.

### Chicago.

Dr. Bayard Holmes has returned home from his European trip.

Dr. Rudolph Holmes sailed recently for Europe, to spend a year in study there.

The trustees of the Northwestern University have decided to continue the medical schools for men and women as separate institutions.

The will of the late Dr. Truman W. Miller (see The Journal, June 2, p. 1425) has been probated. The estate amounts to $175,000, and is left to Dr. Miller's wife and daughters.

Degrees were conferred on twenty-one young women at the commencement exercise[illegible] of the Woman's Medical School of the Northwestern [illegible] held June 14.

The S[illegible] at 481 W[illegible] was [illegible] June [illegible] of Dr. L. B[illegible] and [illegible] idents [illegible] in which immediate attention is required, and in which the long journey to the County or other hospitals would expose the patients to grave risks.

Emergency Ward, No. 1, at 85 Plymouth Place, will be opened about July 1. The City Council has appropriated $2000 for its establishment, after long and patient work on the part of the Medical Woman's Club. The object of the hospital is to take care of surgical and medical emergency cases, and afford prompt first-aid.

The annual meeting of the Chicago Medical Society will be held in the Assembly Hall of the Fine Arts Building, June 20. The annual address will be delivered by Dr. Maurice H. Richardson, professor of surgery in the Harvard Medical School.

## KENTUCKY.

The medical officers of the Confederate Army and Navy held a meeting in Louisville, recently.

Dr. J. S. Redwine entered on his duties as superintendent of the Eastern Kentucky Lunatic Asylum, in Lexington June 1.

## IOWA.

At the meeting of the medical staff of Mercy Hospital in Dubuque, recently, Dr. J. F. McCarthy was chosen president; Dr. J. M. Boothby, vice-president, and Dr. F. W. Meyers, secretary. It was decided to start a training-school for nurses in connection with the institution.

## NEW JERSEY.

Dr. Francis H. Glazebrook, of Elizabeth, has been appointed house physician at the Orange Memorial Hospital.

The board of trustees of the Cooper Hospital has appointed Drs. A. S. Ross and S. E. Fretz, of Sellersville, Pa., resident physicians for the ensuing year.

## DISTRICT OF COLUMBIA.

### Washington.

Dr. Chas. G. Smith has been appointed resident physician of the Emergency Hospital, to take the place of Dr. W. C. Williams, who resigned.

The sixteenth annual commencement exercises of the medical department of the National University were held May 31. The address was made by Dr. C. T. Caldwell.

## MICHIGAN.

The faculty of the Saginaw Valley Medical College met June 5, and elected the following officers: president, L. W. Bliss; vice-president, B. B. Rowe; secretary, D. B. Cornell. It was decided to change the present three-year course to a four-year one, the new system to come into operation in 1901.

## CALIFORNIA.

Dr. Guy Cochran, Los Angeles, has gone to Europe to spend six months in travel and study.

The nineteenth annual commencement exercises of the Cooper Medical College were held in San Francisco, June 5. Dr. William Fitch Cheney addressed the class, which was composed of thirty-eight members.

## INDIANA.

Dr. T. B. Lyon, formerly of South Bend, who went to New Mexico two years ago, has fully recovered his health and has located at Raton.

St. John's Hospital, Anderson, will receive not less than $2000, as a result of the donation of all or part of the wages of the members of the Workingmen's Hospital Association for June 2.

## NEW YORK.

Dr. Roswell Park, Buffalo, has been appointed chief medical director of the Pan-American Exposition.

The second annual commencement of the Cornell University Medical College occurred June 6. Diplomas were granted to fifty-three graduates, of whom twenty-one were women.

## CANADA.

### TREATMENT OF INEBRIATES.

Dr. A. M. Roseburgh has returned to Toronto after spending some time in Boston and vicinity, where he has been studying the practical side of the probation system as applied to the treatment of inebriates. He also visited the state institution for the treatment of inebriates from a pathologic standpoint, at Foxborough. He reports that in recent or mild cases of inebriety placed on probation, about 45 per cent. appear to be reformed, while of the pathologic cases—those of dipsomania—which receive institutional treatment at Foxborough, 37 per cent. are claimed to be reformed or cured. He says that the probation system has been found to be wonderfully successful in the reformation of delinquents, especially first offenders, as of these fully 85 per cent. are reformed. The bill for the treatment of inebriates, now under the consideration of the Ontario government, was presented to authorities, and the provisions thereof were very highly approved by them.

### REGULATION OF THE SALE OF PATENT OR PROPRIETARY MEDICINES OR CURES.

A draft of a proposed bill which will be introduced at the next meeting of the Ontario legislature will seek to regulate this business. It is aimed against the fraudulent or improper advertisement of drugs, medicines or cures, and against the sale of such of these as contain hurtful ingredients; and to license the advertisement or sale of patent or proprietary medicines, and in order to accomplish that purpose, will seek the appointment of an inspector, and further provide for the payment of a license tax in respect of such licenses. "Medicine" is defined as including all substances intended to be administered internally or applied externally to the human body with a view to the prevention, cure or alleviation of any disorder in its functions. "Advertisement" or "Advertise" shall include all things or proceedings intended to attract the attention of the public to any medicine. "Registrar" shall mean the registrar of proprietary medicines appointed under this act for the purpose of carrying into effect any of its provisions. "License" shall mean a license granted under this act, and "Licensee" shall mean the holder of any such license. The proposed registrar shall be appointed by the lieutenant-governor, and shall be attached to the provincial secretary's department. It will be provided that such officer shall be a member of the Ontario College of Pharmacy, and a regular qualified pharmaceutical chemist of at least seven years' standing. His duties are very explicitly set forth. All licenses must be renewed yearly; and the license tax will be $1000 per annum. Article "10" of this act reads: "No person shall advertise or sell or offer for sale any medicine unless the manufacturer or proprietor of same is a licensee." The bill further provides for fines and penalties under the act, and the machinery for putting such legislation into force, when it becomes law.

### Montreal.

The citizens have recently contributed $1060 to the funds of the Victorian Order of Nurses.

Dr. Jas. Bell, of McGill University, is to read the address in surgery at the annual meeting of the Medical Society of Nova Scotia, to be held early in July. The subject will be "Some Observations on Cancer of the Breast."

The annual meeting of the Metropolitan Dispensary was held May 31. The affairs of the institution are apparently in excellent shape; and during the past year 575 cases were treated. Dr. Haldimand was re-elected president.

Such rapid progress has been made in the medical library of McGill that a new building is to be erected at once. Two years ago the Association of Medical Libraries was formed under the supervision of the medical department of McGill, by which it is entirely supported. The library is at the disposal of all doctors, whether graduates or not.

## PARIS LETTER.

### VACCINATION BY SCHOOL-TEACHERS.

It has been proposed in France to allow school-teachers to vaccinate their pupils, and a discussion on this subject took place recently at the Académie de Médecine, the most disguished scientific body of the kind in France, it being a great honor to belong to it, either as a member or a national or foreign associate. Dr. Hervieux spoke about the awards to the school-teachers who had contributed to the spread of vaccination, but Dr. Pinard, the celebrated accoucheur, who is to be president of the obstetric section in the International Medical Congress, opposed the measure on the ground that it would be fraught with danger, as the antiseptic precautions necessary to vaccinate without incurring any risk could hardly be expected on the part of men who had had no medical instruction. A law rendering vaccination obligatory would be much more efficacious. A new sanitary law is under consideration by the Senate, and in Article 6 of the first paragraph the following regulation is laid down: "Vaccination is obligatory during the first year after birth, the eleventh and the twenty-first. Parents or guardians are held responsible as to the carrying out of this rule." Moreover, compulsory disinfection will be resorted to if necessary.

Dr. Hervieux spoke recently of the outbreak of smallpox in Madagascar. The mortality, it would seem, is quite high. Vaccination has been tried with virus sent from France, and from Saigon, and even from calves that were inoculated on the island, but it has been found ineffectual, and he recommended using that of the buffalo, as these animals are found in Madagascar, and this has already been tried at Saigon. Considerable vaccinating has been done in Paris of late on account of the smallpox scare in February. A number of bad cases of black smallpox have occurrred at Marseilles and Toulon, and there was a slight outbreak at the Pitié Hospital, with four deaths in Paris during one week. The vaccination seems to take in a larger percentage of cases among the Americans. Dr. Vaquez, professor of the Faculté de Médecine, had only 4 per cent. who furnished a positive result, whereas in your correspondent's practice, out of about forty-six cases there were eight positive results. Americans, as a rule, do not seem to be vaccinated as often as are the Germans and the French. Instead of scraping the skin, as is done in America, the most noted vaccinators, such as Chambon and St. Yves Mesnard, make a very slight prick or a tiny scratch, so as not to draw blood, and apply collodion, after waiting a few moments. This does not seem to prevent the action of the virus.

### TREATMENT OF ANEURYSM.

Dr. Delbet, who is one of the best surgeons of the younger school, spoke at the Society of Surgery on the treatment of aneurysm by total extirpation and ligation of the arteries coming to or leaving the aneurysm. This treatment, which he has repeatedly advocated, was tried recently with full success by Dr. Monod, surgeon of the St. Antoine Hospital.

### ALCOHOLISM.

Alcoholism is steadily on the increase in France, according to the latest statistics, and everything is being done from a medical point of view to check its progress. It is hard to accomplish anything by legislation, as the wine producers and sellers have a controlling vote in the parliament, and anything attempted against them would lead to untoward results. However, medical men have tried to do something; there has been founded an antialcoholic league, and prospectuses have been posted up in certain hospitals, showing the danger due to intoxicating liquors. Dr. Fernet, member of the Academy of Medicine and physician at the Beaujon Hospital, proposed, in a paper he read before the Academy, that alcoholism should be inscribed as the cause of death whenever the disease could be directly attributed to this factor, as for instance, in delirium tremens and diseases of the kidneys, heart and liver. This proposition was adopted.

### GASTROSTOMY.

Dr. Poirier, who is editing the largest work on anatomy published in France, described a new method of gastrostomy, at a meeting held by the Society of Surgery. One finger's breadth from the ribs, an incision is carried out about 8 cm. in length; the rectus and transversalis muscles are incised, and the peritoneum opened by an incision 4 cm. long. The stomach is seized near the cardia, and is drawn out in the form of a cone, the mucous membrane being spontaneously detached. This cone is fixed by four separate cardinal points, and incised at its summit; the mucous membrane, in the form of a dome, is then detached and incised to a small extent, and a sound is introduced through the aperture thus made, then a few more sutures taken. The catheter is left as it is for from eight to ten days, then afterward is reintroduced two or three times a day for the taking of food. This method has been used on five patients suffering from various complaints necessitating gastrostomy, and has been found to be expeditious. There is no narrowing afterward. In one case, the general condition of the patient remained good eleven months after the operation.

### MALTA FEVER.

In many cases, the so-called Malta fever has been confounded with typhoid fever, and at the recent congress of internal medicine, held at Wiesbaden, Dr. Neusser, of Vienna, made some remarks on what he has noticed concerning this disease. It has repeatedly been mistaken for typhoid or intermittent fever, endocarditis or consumption. The serum of patients suffering from this disease has an agglutinating power of from 1 in 20 to 1 in 1000. The fever attacks especially marines and British colonial troops. The convalescence is slow and necessitates the patient keeping to his bed about 90 days, and there is also danger of a relapse.

### PARIS EXHIBITION.

The great topic of conversation in Paris, not only in social circles but also among medical men, is the exhibition. Preparations are being carried out in the different laboratories, cultures are being made, specimens mounted, papers composed and written out, so that a large number of interesting communications may be expected. The surgical instruments exhibit will be quite worth while visiting; it will be found on the Champs de Mars, and it is likely that in each foreign pavilion there will be also a separate display. The International Medical Congress is to hold its meetings August 2-9, and during that period there will be many dinners, receptions and reunions. A number of sections have been already established, and the work to be carried out has been more or less chosen and arranged. A large number of public building in the Latin Quarter will be used for the special meetings, but the general assemblies will take place in the grand hall of the Sorbonne. However, the greater number of the buildings chosen are near each other, a fact of some importance. There will also be given a reception by the president of the Republic, as well as by the president of the council. The Senate has put the gardens of the Luxembourg at the disposal of the committee, which intends giving a night festival, and there will be banquets offered by the presidents of the different sections to the members belonging to each section.

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# Correspondence.

## Professional Frankness from the Standpoint of Ethics.

### MAY THE DIAGNOSIS OF PULMONARY CONSUMPTION EVER BE ETHICALLY WITHHELD FROM THE PATIENT BY HIS MEDICAL COUNSELOR?

Knickbocker, Texas, May 23, 1900.

*To the Editor:*—I have long been of the opinion that doctors are too often not sufficiently frank with their patients. It is a matter of every-day experience that patients very often are not entirely frank with their medical advisers. I do not hold it to be a duty of the doctor to tell the patient the name and properties of the medicament which he prescribes. To do so is virtually to take the patient into counsel as to the merits or demerits of the remedy in question, and few laymen possess the requisite technical knowledge to qualify them to consult with the doctor on such matters. The exceptional instances only prove the rule. Yet the doctor must be both frank and explicit in his direction as to dietary, mode of life, administration of remedies, etc. To do less than this would be to fall short of doing one's whole duty in the case.

I hold that under no circumstances should a doctor communicate to his patient an unqualifiedly unfavorable prognosis, except when the latter, already suspecting the worst, requests to be informed as to the probable outcome of his illness. There is in this case no option but entire frankness. Such instances occur but seldom. Generally, when such inquiry is made, the medical adviser is fully warranted by the facts in giving a hopeful prognosis. By some process of intuition those patients who are entering the dark valley recognize Nature's law of mortality, and neither need nor wish for confirmation of an inevitable event. To thrust the unsolicited prognosis upon them is an ethical crime. When the doctor has frankly communicated the unfavorable outlook to the nearest friends, his whole duty and his responsibility in this regard are ended.

But if there be no call for the communication by a physician to his patient of an unsolicited fatal prognosis—if, indeed, such a course be, as I hold it to be, an ethical crime—what shall we say of communicating to him the unsolicited diagnosis of a disease which is commonly reputed to be, but which as a matter of fact is not necessarily, of fatal import? May we tell him: "You have cancer?" Should we, or should we not, say to him aloud: "You have consumption?"

If the diagnosis of either cancer or consumption implied, as a necessary corollary, an utterly hopeless prognosis, the same ethical obligation would devolve on the doctor, in other hopeless cases—to inform the nearest friends as to the fatal outlook, and to avoid intimating, by word or sign, the unwelcome truth to the patient who palpably dreads to have his fears confirmed. But since post-mortem records show that 35 per cent. of humanity dying of other diseases present evidences of healed tuberculosis, a fatal prognosis is not necessarily implied as a sequence of the diagnosis of consumption. And since the permanent arrest and cure of consumption, as well as the avoidance of infection to others, calls for intelligent co-operation of the patient with the physician, in a multitude of hygienic details, it appears to me an ethical sin of omission of momentous magnitude *not* to tell the patient frankly the unpalatable truth that he has consumption, so soon as the diagnosis is made.

Every practitioner at climatic resorts, or in charge of a sanatorium, has frequent occasion to regret the tardy diagnosis of pulmonary consumption in patients who come to him in a hopelessly advanced stage of the disease; and it not seldom is the case that such patients were dissuaded by their medical advisers from seeking a change of climate when they themselves had proposed it.

If those physicians who avowedly make it their uniform practice not to tell a patient that he has consumption, "unless he requests the information"—as reported in The Journal, May 12, p. 1158—could witness, as I have repeatedly, the unavailing wrath of their patients, who have later changed climate—after having first changed physicians—over the loss of time and money in slowly regaining a modicum of former health—all due to this unfortunate and too common lack of professional frankness—I think their views as to the best method of "comforting" (?) their patients and their patients' friends would undergo some modification. And I have never been able to think otherwise than that a feeling of resentment on the part of a patient was wholly justified toward a medical adviser who thus withheld from him, however benevolent the motive, the diagnosis of consumption after it was once made.

Until recently it has not been possible to make a diagnosis of pulmonary tuberculosis with approximate certainty and absolute safety to the patient, until after destructive changes had liberated Koch's bacilli for microscopic recognition. The best authorities confess their occasional regrettable errors of diagnosis in the incipiency of the disease, when relying on the symptoms and physical signs alone. But while the tuberculin test has its admitted dangers, unless used with the greatest circumspection, the watery extract of tubercle bacilli, as prepared by Karl von Ruck, M.D., Asheville, N. C., appears entirely devoid of evil results, if used *secundem artem,* while its diagnostic value is equal to that of tuberculin.

It is now possible, therefore, for the general practitioner—may his tribe increase—who wishes to be entirely frank with his tuberculous patients, to make the diagnosis of pulmonary consumption in its incipiency; to tell his patient with obligatory frankness the name and nature of his ailment; and to advise him what course of procedure will at that stage afford him a reasonable prospect of early and complete recovery. And, to my individual view, anything short of entire frankness under these circumstances appears to be ethically indefensible.

Boyd Cornick, M.D.

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A well equipped and endowed Institute of Bacteriology has been erected in Ceylon.

# Deaths and Obituaries.

Paul Gibier, M.D., New York City, died, June 9, of injuries received in a runaway accident. He was born in France in 1851, and was graduated from the University of Paris. In 1885, he was commissioned by the French government to study the cholera epidemic then raging in Spain. His work there procured for him a gold medal from the French Republic and a membership in the Legion of Honor. In 1888 he was sent to study the yellow fever in Havana and Florida. In 1890 he established the Pasteur Institute in New York City. He has since been at the head of that institution, and also of a sanitarium at Suffern, N. Y.

Alfred E. Emery, M.D., died, May 23, in Penacook, N. H., aged 59 years. He studied medicine at Harvard University for two years, and was then appointed acting assistant-surgeon in the United States Navy. His first service was on the hospital ship of the Massachusetts squadron, but later he was attached to one on the North Atlantic. In 1865 he was graduated from the medical department of the University of Vermont. He located in Wilton, Conn., where he remained until 1879, when he moved to Penacook, where he lived until his death. He was a member of the New Hampshire Medical Society and of the United States pension examining board.

Joseph Davis Osborn, M.D., Newark, N. J., died, June 2, after a long illness, aged 67 years. He was graduated from the New York College of Physicians and Surgeons in 1859. During the Civil War he served as surgeon of the Fourth New Jersey Volunteers, and since the close had practiced medicine in Newark.

Edward Stephen Clark, M.D., San Francisco, Cal., died, June 1, aged 44 years. He was born in Kentucky, and educated at the Central University at Louisville, from the medical department of which he received his degree in 1880. He was a member of the San Francisco Medical Society, of the State Medical Society, the San Francisco Polyclinic, and the American Medical Association.

John Nightingale, M.D., died in San Francisco, Cal., June 3, aged 45 years. He was graduated from the Cooper Medical College in San Francisco, and then went to France and Germany to complete his studies. In the winter of 1890, he had la grippe, and had never fully recovered his health.

Melancthon Storrs, M.D., Yale, 1853, died in Hartford, Conn., June 9, from septicemia contracted during an operation. He was born in Mansfield, Conn., in 1823, and served in the Civil War as a surgeon of the Eighth Connecticut Volunteer Infantry. He was once the president of the State Medical Association.

Josiah N. Boggs, M.D., Allegheny, Pa., died at St. Louis, Mo., May 31, aged 71 years. He was graduated from Atlantic Medical College, in 1861, and served during the Civil War as assistant-surgeon of the Fourth Alabama regiment. At its close he settled in Pittsburg.

H. S. Deford, M.D., Jefferson Medical College, 1864, died in Osceola, Mo., May 24. In the spring of 1866, he located in Ottawa, Kan., where he lived until a few months ago.

Charles S. Collins, M.D., College of Physicians and Surgeons, N. Y., 1885, died at his home in New York City, May 20, aged 38 years.

J. D. Ketcham, M.D., died at his home, Tunnelton, Ind., June 4, of smallpox, aged 35 years.

B. P. Clark, M.D., De Ray, Tenn., died May 30, after a protracted illness, aged 73 years.

# Miscellany.

**Ptomain Paralysis.**—A healthy boy of 15 and his mother, who was 40 years of age, were suddenly affected with paralysis of almost all the muscles innervated by the brain. This extended later to the muscles of the trunk and lower extremities, but there was no disturbance in sensibility nor in the sphincters, no preceding infectious disease, and no local phenomena in the alimentary canal. Both mother and son had been eating fish, and Preobrashenski, who reports the occurrence in *Med. Obos.* for January, and also in *Deutsche Ztft. f. Nerve.* xvi, and 6, attributes it to ptomain poisoning, the manifestations resembling those of intoxication with curarin. He believes that many cases of so-called "rheumatic polyneuritis" and paralysis were in reality due to a similar cause.

**Cause of Inefficacy of Diphtheria Serum Per Os.**—To the epithelium and lymphatic system of the intestines must be ascribed the chief rôle in the destruction or neutralization of diphtheria antitoxin when administered by the mouth. Nedrigaloff's numerous experiments and tests have shown that neither the gastric juice, the bile nor the pancreatic juice have any influence on it.—*Vratch,* xxi, 26.

**International Medical Congress.**—Quarters have been secured for the different sections so that members can go conveniently from one to the other. Ophthalmology will be centered at the Hôtel Dieu, with its special clinic; dermatology at St. Louis, on account of its superb museum, and urinary surgery at Necker, with its special equipment. A physician who sends his subscription, receives in return his receipt, membership ticket and railroad certificate. When he enters France he has his railroad ticket stamped at the frontier station. On his arrival in Paris he repairs at once to the offices of the Congress and presents his membership ticket. He is then conducted to a special department for his nationality, the name of his country being placed above the desk. Here he finds a special secretary, able to converse with him in his own language, who stamps his railroad ticket and then gives him a *dossier* or folder—a separate color for each nationality—and in this he finds the programs, meeting places, invitations to receptions, festivities, tickets to excursions, guide to the hospitals, etc. Each secretary is prepared to furnish information supplied by the various agencies in regard to convenient and economical rooms and board. When the visitor is ready to leave Paris the railroad gives him, free of charge, a ticket to the frontier station where he had his ticket stamped when he entered France. The grand night fête in the Luxembourg palace and gardens, we are assured, will be "worthy of its magnificent setting."

**Hospital Ship "Relief."**—The *Hongkong Telegraph* of Monday, March 5, 1900, gives a gratifying account of the impression made by the hospital ship *Relief* on those who inspected her while refitting in port. The article conveys a fuller and better description of the vessel than any which has appeared in our United States journals:

On Saturday afternoon the United States Army hospital ship *Relief* which has been lying here for a short time refitting, was *en fete,* the medical officer in command, Major Perley, having invited the officers of the garrison and of the British and foreign war ships in port to inspect the vessel. A great number responded to the invitation and were shown over the ship by Major Perley and his courteous staff.

The *Relief* is a vessel of 3090 tons, 313 feet in length over all, 455 feet beam, and draws from 16½ to 18 feet of water. She has engines of 4500 horse-power, and can steam seventeen knots, her bunker capacity being 850 tons and her consumption at twelve to fourteen knots forty to fifty tons per day. In appearance she is more like a river boat than a sea-going ship, having a low free board and two tiers of cabins above the main deck; despite her appearance, however, she is said to be a capital sea-boat and made the trip out here from the Atlantic seaboard without once wetting her deck.

There are five wards on board, containing beds for no less than 250 sick, and fine and airy places they are, too, well ventilated and with electric fans fitted at intervals to insure a free circulation of air and keep the temperature down in the tropics. The berths are arranged in rows with gangways between, and are in two tiers. These are on a steel framework and, being all fitted with spring mattresses, are most comfortable. There were about fifty sick on board Saturday, and they all appeared to be very happy and contented with their lot, indeed, a man would be hard to please who was not, for few shore hospitals can boast of such complete arrangements.

The operating-room is a most excellently planned
ment, being situated on the port side of the ship
with large ports, which ensure a plentiful supply
all operations. This, however, is supplemented by two groups of electric lights, so that the most delicate piece of work can be performed either day or night. Round the walls are ranged glass-fronted cupboards containing instruments of all descriptions, all beautifully bright and ranged in order so that any particular one that may be required can be got at in a moment. Another cupboard contains sterilized bandages, lint, and so on, all stored in air-tight glass bottles, while in all the cupboards a barometer is fitted in order that the officer in charge of the operation-room may be able to see at a glance the state of the atmosphere in each and take steps to exclude damp. Another excellent arrangement is a large electric sterilizing apparatus into which all instruments are put as soon as done with, and thoroughly sterilized against next being required for use.

The comfort of the patients in the matter of food and drink is not forgotten either, for the ship possesses a most complete refrigerating plant, which produces fifteen hundred pounds of ice a day, and, in addition to this, there is a large cold-storage chamber in which there is still a large supply of American beef, which came out with the ship six months ago. A couple of sides were hanging in the butcher's shop, and very nice it looked with its firm, yellow fat, which one so seldom sees on Hongkong beef. The cooking arrangements are capital, and, in addition to the regular galley, an electric kitchen is attached to one of the wards, in which any little delicacies that the patients may require at odd times are attended to. It was hard to believe that the neat looking dresser with its little brown pads could in reality be a stove, but a turn of the switch soon convinced one of the fact that coals or oil are not necessarily associated with cooking.

The lavatory arrangements are far and away above anything of the kind to be found in the ocean liner or even in the best hotels ashore. In addition to the ordinary lavatory attached to each ward, there is a bath fitted in the ward itself for the use of patients who can not be moved about much, and both hot and cold water are laid on, while a most ingenious contrivance mixes the two streams when desired and, by the manipulation of a couple of handles and the study of a thermometer attached to the tap, water can be drawn at any temperature required, to within half a degree. Down on the main deck is situated a laundry, and a very fine one it is, fitted with the most modern machinery, and capable of dealing with all the washing, both of patients and attendants. Here, too, there is a big sterilizer in which the clothing and bedding of patients suffering from infectious diseases can be rendered innocuous.

Facing the operation-room, on the port side, is the dispensary, which does not remind one of a chemist's shop so much as one would suppose, for though the bottles are all there they are small in size, and one wonders how two hundred and fifty patients can possibly be dosed from them. Major Perley, however, explained that they did not believe in filling their patients with medicines so much as in carefully studying the case and correcting matters more by fresh air and diet than by drugs.

Another very interesting compartment was the laboratory, with its groups of microscopes and other instruments for studying bacilli, and the rows of tubes and flasks containing cultures of all sorts. Mounted at the end of one ward was the X-ray apparatus, and the visitors were shown the bones of their hands by the means of this wonderful invention, which has revolutionized modern surgery. Photography has not been forgotten and a well-appointed dark-room is fitted on the starboard side of the vessel, with every requisite for the art.

The staff consists of four medical officers in addition to Major Perley, and these are assisted by eight trained nurses, of whom, strange to say, four are English, two German, and only two American, though all were trained in America. The whole vessel gives one an idea of comfort and thoughtful arrangement, from the india-rubber paving tiles to the seltzer plant, which, by the way, turns out a thousand bottles daily for the patients. The vessel is panelled throughout in white, and gives one more the impression of being on board a well-fitted yacht than a floating hospital. If the *Maine,* which our American cousins have so generously fitted out for our wounded in South Africa, is even half as well turned out and comfortable as the *Relief,* then our men have indeed much to be thankful for.

**Metal Clasps for Suturing.**—Michel has invented a sutu[illegible]
device in the sha[illegible] of metal clasps, [illegible] are
[illegible] the lips [illegible] what [illegible]
[illegible] for [illegible] Mi[illegible]

simplest, most rapid and most exact method of suture yet devised. In a communication to the Société de Chirurgie, reported in *La Presse Médicale* of May 19, he states that a laparotomy incision can be sutured with these *agrafes* in thirty to fifty seconds. They are removed after six to eight days, leaving a regular, linear scar.

**City Freed from Mosquitoes.**—A chart was made of the city of Sassari, on the Island of Sardinia, showing every cistern, pond, sewer, ditch, trough, etc., which could breed mosquitoes, and persons were hired to pour petroleum on the surface of the water twice each month. At the same time a vigorous warfare was waged against the mosquitoes in the air by chlorin in cellars and Celli's "zanzolina" or other insecticides in the houses. The results were completely successful, and establish that it is possible to free a city from mosquitoes unless the conditions are exceptionally unfavorable, as at Venice. The expense for a city of 50,000 inhabitants is about $250, including service. Fermi's official report is summarized in the *Gazz. degli Osp.* of April 15.

**Bathing of the New-Born.**—The question whether the new-born should be bathed or not has occupied the attention of the Prussian and German obstetricians during the last decade. Dohrn, in 1880 (*Archiv. f. Gynecologi*, 1880), formulated the following procedure: Having washed the umbilical cord with a 2.5 per cent. solution of carbolic acid, it is wrapped up in carbolized cotton and secured with adhesive plaster. The dressing is left on for seven days. The child is not bathed at all. Artemyeff (*Arch. f. Gyn.*, 1887) modified Dohrn's dressing—he does not apply the adhesive plaster. Lvov (*Jour. Akush. i Jensk. Bol.*, 1888) advised powdering the umbilical cord with one part of iodoform and ten of bismuth. The child is bathed. In 1892, however, Lvov changed his opinion, and suggested another method: After the first bath, the cord is wiped dry, wrapped in absorbent cotton saturated with glycerin and bandaged with gauze. The child is not bathed until the cord falls off. Doctor (*Arch. f. Gyn.*, 1894) has studied this question on 1341 new-born children. His conclusion that children should not be bathed until the cord falls off is based on the fact that such children are less liable to febrile complications; their weight is more rapidly increased, and the cord falls off earlier than in children who are bathed daily. Keilman (*Deutsche Med. Woch.*, 1895, No. 21) reported his observations made on 400 children and arrived at the same conclusion as Doctor, with the exception that in his cases he did not notice the difference in time of the drying up of the cord. Weinstein (*Jour. Akush. i Jensk. Bol.*, 1895, p. 846) also advised against bathing the new-born. He based his conclusions on the observation that the cord in unbathed children falls off earlier. Knopp (*Monatschr. f. Geburtschülfe u. Gyn.*, 1897) warned against bathing the new-born, so as not to infect the vagina with gonorrhea. Neuman (*Berliner Klinische Woch.*, 1898, No. 1), in his report before the Berlin Medical Society, pronounced bathing of the new-born as absolutely harmful. Arthes (Ibid., 1898), made his observations on 150 children and arrived at an opposite conclusion, as did also Czerwenka (*Wiener Klin. Woch*, 1898, No. 11). Kovarski (*Vratch*, 1900, p. 102) has conducted careful observations on 420 children; half of the number were bathed, and the other half were not. With the exception of a large percentage of icterus among the bathed ones there were no other perceptible differences. After summarizing the pros and cons of the subject Kovarski concludes that no scientific proof has as yet been adduced as to the harmfulness of bathing, and that we can follow, without perturbation of spirit, the time-honored custom of bathing the new-born.

**The "Plague of Women in War."**—The following interesting view of certain conditions in South Africa is taken from the *Army and Navy Journal* of June 2:

> A very healthy sentiment that may work a decided reform has been awakened in England by Surgeon Treves' denunciation of the "plague of women" in the South African War. This phrase he curtly used in some brief remarks and it called out great protests from women who misunderstood his meaning. The misconstruction was fortunate, for it focused attention on the subject and gave Dr. Treves occasion to reply at length to his critics, which he did in a speech at the Reformed Club, London. That left no room for doubt. He prefaced his remarks with the almost superfluous statement that no one had a deeper sense than he had of "the splendid work which many large-hearted, unselfish women, professional and amateur alike, are doing in South Africa. Then he paid his respects to the other class—those 'elaborately dressed ladies masquerading in summer toilets and arranging picnics about Cape Town, which was packed with women idlers, the majority of them 'society' or 'smart' people, who, yearning for new excitements, had come out to South Africa to make a holiday. The condition of affairs, as brought about by the presence of these ladies, was an absolute disgrace to our country. If a sick or wounded officer came down from the front in search of accommodation he had not the slightest chance of getting into a decent hotel, the rooms being occupied by ladies who had not the faintest pretext for being in South Africa beyond their own desire to make the campaign a means of obtaining new pleasure and excitements. That, however, was not the worst side of their presence. When dinner parties and other junketing grew wearisome, they would make up parties to visit the hospitals. 'What shall we do today?' 'Oh, let's go and see the wounded,' would be the preparation for an invasion of the base hospitals and an incalculable amount of interference with the work of the medical staff. Officers in charge of the wounded know what influence means in the matter of promotion, and so the women would be taken round the wards and the wounded shown, to the utter disorganization of discipline and duty."
>
> Surgeon Treves has been very generally supported. The *Westminster Gazette* says: "This 'social influence,' this 'petticoat patronage,' is, we are told, the canker which for years has been sapping the vitality of the British Army. It is a notorious fact that the surest method of obtaining a good appointment is for an officer to get his name noted on the list kept by a certain lady of title; the good word of the dame will more effectually secure the advancement of her nominees than any amount of meritorious service or hard work without such a backing."

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## BOOKS AND PAMPHLETS RECEIVED.

Acknowledgement of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review as dictated by their merits, or in the interests of our readers.

Treatment of Fractures. By Charles Locke Scudder, M.D., Surgeon to the Massachusetts General Hospital. Assisted by Frederick J. Cotton, M.D. With 585 Illustrations. Cloth. Pp. 433. Price, $4.50. Philadelphia: W. B. Saunders.

Contributions to the Science of Medicine. Dedicated by his Pupils to William Henry Welch on the Twenty-first Anniversary of his Doctorate. Cloth. Pp. 1060. Baltimore, Md.: Johns *Hopkins Press. 1900.*

Care of the Child in Health. By Nathan Oppenheim, A.B., M.D., Attending Physician to the Children's Department of Mt. Sinai Hospital Dispensary. Cloth. Pp. 305. Price, $1.25. New *York: The MacMillan Co. 1900.*

Twentieth Century Annual Illustrated Catalogue for 1900 Cloth. Pp. 1123. By Peter Van Schaack and Sons. Chicago: Blakely Printing Co. 1900.

Report of the Housing of Laboring Classes in the City of Washington, D.C. By George M. Kober, M.D. Paper. Pp. 120. Washington: Government Printing Office. 1900.

Transactions of the Medical Society of Delaware. Held at Wilmington June 13, 1899. Paper. Pp. 70. Wilmington, Del.: Sunday Star Job Print. 1899.

Register of Internes of the Cincinnati Hospital (Formerly Commercial Hospital). 1830-1890. Compiled by Arch. I. Carson, M.D. Paper. Pp. 48. Published by the Society of Internes. 1900.

Report of the Minister of Agriculture for the Dominion of Canada, for the year ended Oct. 31, 1899. Paper. Pp. 258. Price $.15. Ottawa: S. E. Dawson, 1900.

Proceedings of the Pathological Society of Philadelphia. May, 1900. Paper. Pp. 188. Philadelphia: Published by the Society. 1900.

Acts of the One Hundred and Twenty-Fourth Legislature of the State of New Jersey and Fifty-sixth Under the New *Constitution.* Paper. Pp. 630. Trenton, N.J.: MacCrellish & Quigley. 1900.

Report of the Health Officer of the District of Columbia. 1899. Cloth. Pp. 367. Washington: Government Printing Office. 1899.

The Apistophilon. A Nemesis of Faith. By Frank D. Bullard, A.M. Cloth. Pp. 109. Chicago: R. R. Donnelley & Sons Co. 1899.

Schering's Formalin Lamp and Disinfector. Schering's Formalin Disinfectant and Deodorizing Lamp. New York City: Schering & Glatz.

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## NEW PATENTS.

Patents of May 22 and 29 of interest to Physicians.

650,218. Orthoguaiacol sulfo-acid and making same. Emil Barell, Basle, Switzerland.
649,896. Head-bandage. Jacob Baughman, Burlington, Iowa.
650,003. Dissolving albumen. Hermann Bremer, Munich, Germany.
650,166. Pneumatic syrup-jar for soda fountains. Charles N. Chadbourn, Minneapolis, Minn.
649,984. Invalid bed. Lydia A. Goodson, Elgin, and C. S. Burton, Oak Park, Ill.
649,938. Obtaining tuberculosis toxin. Gustav Landmann, Frankfort-on-the-Main, Germany.
650,080. Syringe. John S. Marmaduke, Marshall, Mo.
650,187. Making boracic acid and chlorates. Charles C. Moore, Liverpool, England.
650,022. Volatile chloral compound and making same. Heinrich Oppermann, Bernburg, Germany.
650,023. Making magnesium superoxid. Heinrich Oppermann, Bernburg, Germany.

650,203. Hypodermic syringe. Albert S. J. Stovall, Elberton, Ga.
650,287. Draft-tube for effervescing drinks. Wm. M. Wheildon, Boston, Mass.
650,348. Hypodermic syringe. Charles Witowski, Boston, Mass.
650,774. Surgical appliance. Robert W. Barton, Marion, Ark.
650,714. Hernial truss. Henry Fehr, Kansas City, Mo.
650,760. Gelatin capsule. Frederick H. Metcalf, Franklin, Ill.
650,616. Automatic measuring cork and recording dial. Fernand Salomon, Philadelphia, Pa.
650,617. Combined dropper and liquid measurer, recording dial, and dose-indicator. Fernand Salmon, Philadelphia, Pa.
650,496. Tonsillotome. Frederick A. Stohlmann and L. G. Pfarre, New York City.
650,696. Emetin salts and making same. Wm. G. Whiffen, London, England.

# Queries and Minor Notes.

## TREATMENT OF PELLAGRA.

NEW ORLEANS, June 1, 1900.

*To the Editor:*—Will you kindly answer in your query column, the treatment of "Pellagra," an endemic erythematous disease of Italy. By doing so you will oblige, Respectfully, M. D.

ANSWER:—The treatment of pellagra is, first of all, prophylactic, the avoidance of or the discontinuance of the use of the diseased corn that causes it. The drug that appears to be most depended on is arsenic, but its use will depend somewhat on the condition of the gastro-intestinal tract. For the digestive disorders, the usual remedies are indicated, with gastric lavage, milk diet, intestinal antiseptics, etc. When the disease has seriously involved the nervous system, treatment is not, as a rule, very effective. The disorder is practically unknown in this country, and no method of treatment has been extensively tried here.

# The Public Service.

## ARMY CHANGES.

Movements of Army medical officers under orders from the Adjutant-General's Office, Washington, D. C., May 25 to June 1, 1900, inclusive:

John S. Fogg, acting asst.-surgeon, previous orders amended so as to require him to report to the commanding officer, Columbus barracks, Ohio, for duty.

Henry S. Kilbourne, major and surgeon, U. S. A., member of a retiring board convened at Governor's Island, N. Y.

John L. Phillips, captain and asst.-surgeon, U. S. A., member of a retiring board at Governor's Island, N. Y.

Francis J. Pursell, acting asst.-surgeon, to duty in the Department of California.

J. W. Richards, acting asst.-surgeon, to Governor's Island, N. Y., and thence to Havana, Cuba, for temporary duty on the transport *Ingalls*.

Henry E. Wetherell, lieutenant and asst.-surgeon, U. S. A., to duty in the Department of California.

Halsey L. Wood, acting asst.-surgeon, leave of absence granted.

## NAVY CHANGES.

The changes in the medical corps of the United States Navy for the week ending June 2, 1900.

Asst.-Surgeon W. H. Barber, detached from the *Alliance* when placed out of commission and ordered to duty at the naval hospital, New York City.

Asst.-Surgeon C. N. Fisk, commissioned assistant-surgeon from May 15, 1900.

Surgeon O. D. Norton, detached from the *Monadnock* and ordered to the *Bennington*.

Asst.-Surgeon J. S. Taylor detached from the *New Orleans* and ordered to the *Culgoa*.

Asst.-Surgeon F. J. Grow, detached from the *Richmond* and ordered to the *Monadnock*.

## MARINE-HOSPITAL CHANGES.

List of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the 7 days ending May 31, 1900.

Surgeon Preston H. Bailhache, detailed as official delegate of the Service at the meeting of the American Medical Association at Atlantic City, N. J., June 5-8, inclusive.

Asst.-Surgeon L. E. Cofer, to proceed to San Francisco, Cal., and report to Surgeon J. J. Kinyoun for special temporary duty.

Acting Asst.-Surgeon R. S. Primrose, granted leave of absence for 6 days.

Hospital Steward S. W. Richardson, granted leave of absence for seven days from May 20, 1900, under the provisions of paragraph 201, Regulations, M. H. S.

### APPOINTMENTS.

M. Victor Safford and C. A. Bailey appointed acting assistant-surgeons for duty at the Immigration Depot, New York City.

W. F. Mendowell appointed hospital steward and chemist.

## HEALTH REPORTS.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, Marine-Hospital Service, during the week ended June 9, 1900:

### SMALLPOX—UNITED STATES

Colorado; Logan Co., May 25, 1 case: Mesa Co., May 25, 1 case.
District of Columbia: Washington, May 26 to June 2, 1 case.
Florida: Jacksonville, May 26 to June 2, 1 case.
Illinois: Chicago, May 26 to June 2, 1 case.
Indiana: Indianapolis, May 19 to June 2, 5 cases.
Iowa: Des Moines, May 1-31, 6 cases.
Kansas: Wichita, May 26 to June 2, 1 case.
Kentucky: Covington, May 26 to June 2, 11 cases.
Louisiana: Caddo, May 12-26, 5 cases; New Orleans, May 26 to June 2, 57 cases, 16 deaths.
Massachusetts: Fall River, May 26 to June 2, 1 case; Lowell, May 26 to June 2, 3 cases.
Michigan: Grand Rapids, May 19 to June 2, 5 cases.
Minnesota: Chippewa Co., May 15-29, 4 cases; Duluth, May 15-29, 2 cases; Hennepin Co., May 15-29, 4 cases; Houston Co., May 15-29, 4 cases; Jasper, May 15-29, 2 cases; Meeker, May 15-29, 2 cases; Minneapolis, May 15-29, 38 cases; Northfield, May 15-29, 4 cases; Pine Co., May 15-29, 7 cases; St. Paul, May 15-29, 8 cases; Sheldon, May 15-29, 4 cases; Waverly, May 15-29, 4 cases; Wright Co., May 15-29, 3 cases.
Ohio: Cleveland, May 26 to June 2, 24 cases; Dayton, May 26 to June 2, 1 case; Portsmouth, May 26 to June 2, 1 case.
Pennsylvania: Pittsburg, May 26 to June 2, 3 cases.
South Carolina: Greenville, May 19 to June 2, 4 cases.
Utah: Salt Lake City, May 26 to June 2, 5 cases.
Wyoming: Aspen, May 19-26, 6 cases; Rock Springs, May 19-26, 8 cases.

### SMALLPOX—FOREIGN.

Austria: Prague, May 12-19, 3 cases.
Belgium, Antwerp, May 12-19, 2 cases.
Brazil: Bahia, April 21 to May 5, 1 case, 1 death.
Canada: Winnipeg, May 1-30, 16 cases, 8 deaths.
Egypt: Cairo, May 6-13, 5 deaths.
England: Liverpool, May 12-19, 2 cases; London, May 12-19, 3 cases; Southampton, May 12-19, 1 case.
France: Lyons, May 12-19, 5 cases; St. Etienne. May 1-15, 4 cases, 1 death.
Greece: Athens, May 12-19, 2 cases, 1 death.
India: Bombay, May 1-8, 33 deaths; Calcutta, April 7-14, 31 deaths; Kurrachee, April 29 to May 6, 16 cases, 14 deaths; Madras, April 28 to May 4, 1 death.
Mexico: Vera Cruz, May 16-23, 6 cases, 4 deaths.
Russia: Moscow, May 5-12, 9 cases, 3 deaths; Odessa, May 12-19, 11 cases, 2 deaths; St. Petersburg, May 5-12, 216 cases, 9 deaths; Warsaw, May 5-12, 1 death.
Scotland: Glasgow, May 18-25, 30 cases, 1 death.
Straits Settlements: Singapore, April 7-14, 7 deaths.
Uruguay: Montevideo, April 1-8, 1 case.

### YELLOW FEVER.

Colombia: Barranquilla, May 5-12, 1 case, 1 death; Panama, May 22-29, 3 cases, 1 death.
Cuba: Cienfuegos, (Santa Clara Barracks) May 16-23, 1 case; Havana, May 16-23, 1 case.
Mexico: Vera Cruz, May 19-26, 22 cases, 6 deaths.

### CHOLERA.

India: Bombay, May 1-8, 28 deaths; Calcutta, April 7-14, 113 deaths; Madras, April 28 to May 4, 1 death.

### PLAGUE—UNITED STATES

California: San Francisco, March 8 to June 8, Reported present.

### PLAGUE—FOREIGN.

Arabia: Aden, April 7-28, 266 deaths.
Australia: Sydney, April 28 to May 5, 38 cases, 10 deaths.
China: Hongkong, April 22-28, 33 cases, 28 deaths.
Egypt: Alexandria, May 8-11, 5 cases, 2 deaths; Port Said, May 3-5, 8 cases, 3 deaths.
India: Bombay, May 1-8, 340 deaths; Calcutta, April 7-14, 465 deaths: Kurrachee; April 29 to May 6, 219 cases, 173 deaths.
Japan: Osaka and Hiogo, May 7-13, 8 cases.
Kurdistan: April 2-17, 158 cases, 122 deaths.
Turkey: Smyrna, May 29, 1 case.

## CHANGE OF ADDRESS.

Dr. F. S. Alger, from Keokuk, Iowa, to Bentley, Ill.
Dr. E. P. Adams, from 762 E. McMillan St. to St. Cloud Flats No. 1, Grand St., Cincinnati, Ohio.
Dr. C. H. Alden, from Washington, D. C., to Col. U. S. A., Hyannisport, Mass.
Dr. D. Ames, from Baltimore to Catonsville, Md.
Dr. L. D. Alexander, Jr., from Charlottesville, Va., to New Canaan, Conn.
Dr. F. W. Bates, from Charlottesville, Va., to 512 Penn Ave., Ft. Worth, Texas.
Dr. J. T. Baker, from Main St., Charlottesville to Box 309, Pulaski City, Va.
Dr. T. H. Barlow, from 204 S. Lincoln St., Chicago, Ill., to Alexandria, Minn.
Dr. H. B. Blackwell, from Charlottesville, Va., to Wilmington, N. C.
Dr. J. H. Blackburn, from Woodburn to State St., Bowling Green, Ky.
Dr. W. J. Bauer, from Promise City, Iowa, to 3348 22d St., San Francisco, Cal.
Dr. E. S. Barker, from 245 to 238 La Salle Ave., Chicago, Ill.
Dr. H. L. Baker, from 4 S. Kedzie Ave. to 655 W. 12th St., Chicago, Ill.
Dr. S. K. Burgess, from 9 S. Ada St. to 165 S. Wood St., Chicago, Ill.
Dr. B. J. Callahan, from Philadelphia, Pa., to Dakota City, Ia.
Dr. J. H. Caton, Jr., from Louisville, Ky., to Caton, Tex.
Dr. J. Clements, from Kansas City, Mo., to Nutley, N. J.
Dr. M. Crook, from University, Va., to Jacksonville, Ala.
Dr. J. H. Crawford, from Augusta to Martin, Ga.
Dr. W. Durrett, from Emden, Mo., to Ralston, O. T.
Dr. B. G. Dyer, from Des Moines to Gilbert Station, Iowa.
Dr. M. Da Costa Bates, from Terry, S. D., to Jackson Boul. and Halsted St., Chicago, Ill.
Dr. A. O. Eckhardt, from Silverton to San Jose, Colo.
Dr. T. W. Greenley, from Hot Springs, S. D., to Loon Lake, N. Y.
Dr. T. A. Groover, from Greytown, Nic. C. A., to Pidcock, Ga.
Dr. A. H. Geiger, from 18 Lincoln Ave. to German Hospital, Larrabee St. and Grant Pl., Chicago, Ill.
Dr. O. P. Hendrixson, from 26 E. Duncan St., Columbus, to Yellow Springs, Ohio.
Dr. W. D. Hoyer, from 18 W. 4th St. to 155 Dakota Ave. Columbus, Ohio.
Dr. F. A. Hohenschuh, from Iowa City to 223 5th Ave, Clinton, Iowa.

Dr. E. P. Hummel, from LaPorte City to Dysart, Iowa.

Dr. Wm. Hendricks, from 59th and Center Sts., to 936 W. 63d St., Chicago, Ill.

Dr. A. F. Hillman, from 171 La Salle Ave. to 328 La Salle St., Chicago, Ill.

Dr. A. E. Hoadley, from 683 Washington Boul. to 84 S. Robey St., Chicago, Ill.

Dr. W. Van Hook, from 4043 Grand Boul. to 5759 Washington Ave., Chicago, Ill.

Dr. F. P. Knauf, from Chilton to New Holstein, Wis.

Dr. A. F. Kemp, from Venice to Benton City, Mo.

Dr. M. F. Lee, from 177 E. Long St to 49 N. 9th St., Columbus, Ohio.

Dr. J. A. Miller, from Detroit to Bedlow, Mich.

Dr. Olin McCormick, from Saunemin to Herscher, Ill.

Dr. H. M. W. Moore, from 243 E. Town St. to 656 E. Long St., Columbus, Ohio.

Dr. J. S. Mott, from Commerce Bldg. to Rialto Bldg., Kansas City, Mo.

Dr. W. T. Moffett, from Williamsville to 346 W. State St., Jacksonville, Ill.

Dr. J. J. Minot, from Boston to Blue Hill Ave., Mattapan, Mass.

Dr. L. D. Mason, from Brooklyn, N. Y., to P. O. Box 226, Greenwich, Conn.

Dr. G. H. Moldenhauer, from 13 Clarinda St. to 418 Chicago Ave., Chicago, Ill.

Dr. E. R. Morse, from 4337 to 4311 Berkley Ave., Chicago, Ill.

Dr. W. L. Powell, from Charlottesville, Va., to Policlinic Hospt., Philadelphia, Pa.

Dr. W. H. Prioleau, from Charleston, S. C., to Buffalo Lithia Springs, Va.

Dr. B. J. Read, from Charlottesville to Bedford Springs, Va.,

Dr. E. F. Reese, *from Richmond to Assamoosick, Va.*

Dr. L. F. Richardson, from 41 Laflin St., Chicago, Ill., to Fairfax, Iowa.

Dr. G. F. Ramsey, from Charlottesville, Va., to Union Springs, Ala.

Dr. R. Stonestreet, *from Paragon Mills to Flat Rock, Rural Del.* No. 2, Tenn.

Dr. S. L. Scott, from Charlottesville to Box 212 Fredericksburg, Va.

Dr. C. W. Sydnor & Son, from Strasburg to Dry Bridge, Va.

Dr. J. W. Smathers, from Charleston, S. C., to Turnpike, N. C.

Dr. Mrs. M. S. Schmidt, from 892 Kedzie Ave. to 1596 W. 22nd St., Chicago, Ill.

Dr. J. F. Sloan, from 530 W. Adams St. to 296 Marshfield Ave., Chicago, Ill.

Dr. Gould Smith, from Homer to Pierson, Ill.

Dr. C. M. Shanely, from Forman to Lidgerwood, N. D.

Dr. J. E. Sawyer, from 4643 Evans Ave. to 472 E. 47th St., Chicago, Ill.

Dr. G. A. Trueman, from Chicago, Ill., to Munising, Mich.

Dr. J. A. Townsend, from Unionville to City Hospital, St. Louis, Mo.

Dr. S. J. Torney, from Saratoga to Stacyville, Iowa.

Dr. E. B. Tutenor, from 3553 Prairie Ave. to 3645 Grand Boul., Chicago, Ill.

Dr. J. P. Williams, from 1511 W. Broad St., Nashville to Bon Air, Tenn.

Dr. O. K. Womack, from Nashville to Stewart, Tenn.

Dr. J. W. Warbinton, from 11th and Walnut Sts. to 554 New Ridge Bldg., Kansas City, Mo.

Dr. A. J. Westlake, from Washington, D. C., to Breesport, N. Y.

Dr. S. M. White, from Minneapolis, Minn., to Somonauk, Ill.

Dr. C. L. Wheaton, from 42 E. Madison St., Chicago, Ill., to 1683 Ogden St., Denver, Colo.

Dr. J. J. Yates, from Nashville to Roberson Fork, Tenn.

Dr. J. M. Yarborough, from Charlottesville, Va., to Navasota, Tex.

Dr. C. E. Zink, from Baltimore, Md., to care F. E. Boardman, Little River, Conn.

## Current Medical Literature.

Titles not marked with an asterisk (*) are noted below.

### New York Medical Journal, June 2.

1.—*Microbes—What Are They? Henry G. Graham.
2.—*"Estivo-Autumnal Fever" in New Orleans, Summer and Autumn, 1899. (Continued). H. A. Veazie.
3.—*On a Little-Known Method of Treatment of Furunculosis. Gustav Langmann.
4.—*Diseases of Blood in Their Relation to Surgery, and Their Treatment. George G. Van Schaick.
5.—*Desultory Remarks Concerning Diphtheria. J. Wilkinson Jervey.
6.—Case of Mediastinal Growth with Subsequent Tuberculosis Disorganization. Mistaken for Aneurysm of Arch of Aorta. Frederic Griffith.

### Philadelphia Medical Journal, June 2.

7.—*Hospitals for Insane and Study of Mental Diseases. Stewart Paton.
8.—*Diagrams of Genito-Urinary Tract, with a Table for Keeping Records. Ramon Guitéras.
9.—*Registration of Tuberculosis. Lawrence F. Flick.
10.—*Asthma. Richard B. Faulkner.
11.—*Siphonage of Partitioned Bladder for Individual Kidney Urines. Andrew J. Downes.
12.—*Prognosis in Fractures. Clinton B. Herrick.

### Medical Record (N. Y.), June 2.

13.—*Radical Cure of Epithelial Cancer by Arsenic. C. Trunecek.
14.—*Cystic Tumors of Testis and Epididymis. James B. Bullitt.
15.—*Health Conditions in Hawaiian Islands. Charles E. Davis.

### Boston Medical and Surgical Journal, May 31.

16.—*Inductive Method Applied to Medicine. C. W. Eliot.
17.—*Course in Pathology at Harvard Medical School. Wm. T. Councilman.
18.—*Case System in Medicine. W. B. Cannon.
19.—*Personal Experience in Teaching of Surgery. Herbert L. Burrell.
20.—*Consideration of Principal Objections to "Section Teaching" Together with Some of its Advantages. A. H. Wentworth.

### Medical News (N. Y.), June 2.

21.—*Treatment of Membranous Colitis. W. H. Thomson.
22.—*Sanitarium Treatment of Incipient Pulmonary Tuberculosis and its Results. E. L. Trudeau.
23.—*Prevention of Scarlet Fever. Floyd M. Crandall.
24.—*State of New York and Pathology of Insanity. P. M. Wise.
25.—Hip-Joint Amputation. Wm. D. Hamilton.
26.—Stump Pregnancy. John C. Morfit.

### Cincinnati Lancet-Clinic, June 2.

27.—*Some Points on Benign Stricture of the Rectum. Louis J. Krouse.
28.—Present Status of Abdominal Surgery. Rufus B. Hall.
29.—*Alcohol: Its Place. R. T. Trimble.
30.—Errors in Diagnosis. George Sprague.

### Medical Review (St. Louis, Mo.), May 26.

31.—*Nature of Some Epithelial Growths and Their Treatment with Formalin. Martin F. Engman.
32.—Progress in Medicine. J. D. Brummall.
33.—Case of Acute Yellow Atrophy of Liver in Child 4 Years of Age. M. J. Lippe.

### Medical Fortnightly (St. Louis), May 25.

34.—*Remarks on Vasectomy Relative to Enlarged Prostate and Bladder Atony. Reginald Harrison.
35.—Efficiency of Our Health Laws. H. W. Chapman.
36.—Defectus Uteri—Report of Case. J. H. Miller.
37.—Physical Basis of Insane Delusions. W. J. Chenoweth.

### Medical Age (Detroit), May 10 and 25.

38.—Addiction to Drugs, Especially in Reference to the Medical Profession. Richard Dewey.
39.—Dislocation of External Semilunar Fibrocartilage of Right Knee; Removal of Cartilage—Case of Complete Rupture of Quadriceps Extensor Tendon Treated by Suture of Tendon. A. E. Halstead.
40.—Typhoid Fever in Infant Nine Months Old. Recovery. Wm. P. Northrup.
41.—Posthom Shadows in Medical Science. W. P. Manton.
42.—*Applicant for Life Insurance Should Receive More Protection in his Medical Examination. J. Howe Adams.
43.—Malignant Disease of Uterus; Malaria. Wm. H. Wathen.

### Virginia Medical Semi-Monthly (Richmond), May 11.

44.—*Physiologic Treatment of Typhoid Fever. T. S. Dabney.
45.—Case of Morphinism, Cigarette Smoking, Dropsy, Convulsions. W. P. Carr.
46.—*Treatment of Pneumonia. J. C. Walton.
47.— Liability of Mistaking Locomotor Ataxia for Rheumatism. E. L. Tompkins.
48.— Clinical Significance of Albuminuria and Tube Casts. A. L. Gray.
49.— Irregular Case of Cerebrospinal Meningitis. Wade H. Atkinson.
50.— Advanced Remedies of To-day. W. P. C. Hazen.

### Bulletin of the Johns Hopkins Hospital (Baltimore, Md.), May.

51.—*Urinary Anomalies. Thomas R. Brown.
52.—*Acute Leukemia in Childhood with Report of Case. Thomas McCrae.
53.—*Personal Experience in Operations for Stone in the Bladder. A. T. Cabot.

### American Journal of Obstetrics (N.Y.), May

54.—*Problem in Antenatal Pathology: Recurrent Monstriparity. J. W. Ballantyne.
55.—*Indications, Technique, and Results of Improved Alexander Operation in Aseptic Adherent Retroversions of Uterus, When Combined with Inguinal Celiotomy via the Dilated Internal Inguinal Ring. A Goldspohn.
56.— Concerning Some Fallacies of Diphtheria and Antitoxin Statistics. Adolph Rupp.
57.—Some Recent Experiences in Intestinal Surgery. B. C. Hirst.
58.—Multilocular Cystic Growth of Ovary, Accompanied by Increased Growth of Hair and Change of Voice, with Recurrence in Abdominal Incision. Gwilym G. Davis.
59.—Abdominal Pregnancy. Report of Case. H. Meek.
60.—Preventive Gynecology. Richard R. Smith.
61.—Review of Five Years' Experience with Pelvic Diseases at Vanderbilt Clinic. Wm. S. Stone.
62.—Results of Modern Aseptic Surgical Technique. Hunter Robb.
63.—New Speculum. H. F. Gau.

### Cleveland Journal of Medicine, May.

64.—Case of Diplegic Idiocy in its Clinical and Pathologico-anatomic Aspects. A. P. Ohlmacher.
65.—*Otitis Media. Howard S. Straight.
66.—*Some Causes of Pains in Feet. C. A. Hamann.
67.—Sarcoma of Bladder. Wm. C. Bunce.
68.—*Enteroptosis Relative to Disorders of Digestive Tract and Circulation. (To be Continued). N. Rosewater.
69.—Feeding in Typhoid—A Case in Point. G. S. Whiteside.
70.—Aseptic Pocket Hypodermic Syringe. James H. Montgomery.
71.—Case of Extreme Genu Valgum Corrected by Supracondyloid Osteotomy. Wm. E. Wirt.

**Physician and Surgeon (Ann Arbor, Mich.), April and May.**

72.—*Education of Laity in Medicine. Theodore A. McGraw.
73.—Observations on Influenza. David L. Walmsley.
74.—*Faulty Methods of Education as Cause of Neuroses in Children. Arthur D. Holmes.
75.—*Diagnosis of Chronic Catarrh of Stomach. Charles D. Aaron.
76.—Some Causative Factors in Certain Diseases of Women. Otto T. Toepel.
77.—*Infantile Nephritis. Charles Douglas.
78.—*Intestinal Sand. Conrad Georg, Jr.
79.—*Use of Ethyl Bromid as General Anesthetic. Walter R. Parker.
80.—*Electricity in Treatment of Menstrual Derangements. Peter M. Campbell.
81.—*Therapeutics of Nitrities. Delos L. Parker.

**Medical Herald (St. Joseph, Mo.), June.**

82.—Post-partum Hemorrhage. W. S. Thompson.
83.—Some Interesting Genito-Urinary Specimens. Bransford Lewis.

**Journal of Eye, Ear and Throat Diseases (Baltimore, Md.), May-June.**

84.—Electric Treatment of Exophthalmic Goiter and of Simple Chronic Glaucoma. M. E. Valude.

**University Medical Magazine (Philadelphia), May.**

85.—*Coccygodynia. Barton C. Hirst.
86.—*Tumors of Vermiform Appendix. A. O. J. Kelly.
87.—*Perforation in Typhoid Fever from an Operative Standpoint, with Report of Cases. Gwilym G. Davis.
88.—Rhythmical Hysteria. James H. Lloyd.
89.—Two Cases of Interscapulo-Thoracic Amputation. J. Wm. White.

**Regular Medical Visitor (St. Louis, Mo.), May 15.**

90.—Two Cases of Chancre of Groin. A. H. Ohmann-Dumesnil.
91.—Enlarged Tonsils. Oscar F. Baerens.
92.—Can Fractures Always be Cured by Perfect Apposition and Immobilization? Emory Lanphear.
93.—Thermometry. C. Frederick Pfingsten.

**International Medical Magazine, (N.Y.), May.**

94.—Abdominal Operation for Multiple Uterine Fibroid; Tubal Disease and Pregnancy. E. E. Montgomery.
95.—*Some Points in Connection with Etiology and Treatment of Diabetes Mellitus. Alexander W. Beck.
96.—Chronic Hypertrophy of Prostate. (Concluded). J. D. Thomas.
97.—Some Diseases of Ear in Children. (To be Continued). George C. Stout.
98.—Prognosis and Treatment of Gastric Ulcer. Boardman Reed.
99.—Chemical Examination of Urinary Sediments and Albuminous Urine. A. Robin.

**Medical Mirror (St. Louis, Mo.), May.**

100.—What the World Owes to Vaccination. J. F. Marchand.
101.—*Intestinal Antisepsis by Means of Chlorin Water in Typhoid Fever. O. D. Fitz-Gerald.
102.—Fernand Henrotin, M.D. I. N. Love.

**Medical and Surgical Bulletin (Nashville, Tenn.), May.**

103.—Two Weeks' Experience with Cancer. M. C. McGannon.
104.—Amputation of Breast After Method of E. J. Senn. T. J. Happel.
105.—Report of Case and Operation Under Difficulties. J. B. Jackson.

**Denver Medical Times, May.**

106.—*Transscapular Amputation. N. Senn.
107.—*Practice of Medicine and Surgery in the Higher Altitudes. R. Harvey Reed.
108.—Presentation of Code of Ethics. W. P. Munn.
109.—*Patient in Colorado. E. P. Hershey.

**Richmond Journal of Practice, April.**

110.—How Can the Physician Best Collect His Fees? R. L. Payne and S. W. Dickinson.
111.—Clinical Microscopy in Diseases of Respiratory Organs. H. Stuart MacLean.
112.—Difference in Cause, Symptoms, Results and Treatment of Grip and Colds. Wm. S. Gordon.

**Columbus Medical Journal, May.**

113.—*Treatment of Pulmonary Tuberculosis by Collapsing the Lung. Sherman Leach.
114.—Pneumonia and Its Treatment. S. C. Dunn.
115.—What We Want from Doctors. W. F. Oldham.
116.—Address on Behalf of the Faculties at Eighth Annual Commencement Ohio Medical University. Otto Arnold.

**Peoria Medical Journal, May.**

117.—Eye-Strain as Cause of Simpler Eye Disease. Charles D. Thomas.
118.—Study of the Hand for Indication of Disease. Charles H. Brobst.
119.—Pulmonary Tuberculosis. B. T. H. Stetler.

**The Stylus (St. Louis, Mo.), May.**

120.—*Limitations of Tuberculosis. (Concluded). William Porter.
121.—*The Therapy of Miscarriage. R. B. Turner.
122.—Valedictory to Graduating Class of Beaumont Hospital Medical College. Walter B. Dorsett.
123.—Cyanosis Neonatorum. John A. Hale.
124.—Use of Creosote in Treatment of Malarial Conditions in Children. L. P. Walbridge.
125.—Recent Improved Methods in Stomach Diagnosis. (To be continued). M. D. Schmalhorst.

**Obstetrics (N.Y.), May 1.**

126.—Bacteriologic and Clinical Researches with Reference to Slight Elevations of Temperature During Puerperium. K. Franz.
127.—On Treatment of Abortions. J. S. Baer.

**International Journal of Surgery (N.Y.), May.**

128.—Rupture of Liver and Gall-Bladder. Carl V. Vischer.
129.—Up-To-Date Treatment of Fractures. H. L. Stickney.
130.—Technique of Surgical Gynecology. (Continued). Augustin H. Goelet.
131.—Regional Minor Surgery. (Continued). George G. Van Schaick.
132.—Treatment of Fractures. (Continued). W. L. Estes.
133.—Treatment of Large Caliber Urethral Impediments. Ferd. C. Valentine.
134.—Enchondrosis; Compound Comminuted Fracture of Skull; Acute Appendicitis; Appendicitis with Perforation of Appendix, and General Septic Peritonitis; Hysterectomy; Ovariotomy; Tubo-Oöphorectomy; Exploratory Laparotomy. George P. Morgan.
135.—Heroin in Surgical Practice. J. Wiesner.
136.—New and Simple Method for Surgical Treatment of Hemorrhoids. C. S. Parkhill.
137.—Attitude of Accident Insurance Companies Toward Railway Surgeons. M. C. Day.
138.—Railway Surgeon and Lawyer. (Continued). W. K. Vance.
139.—Medicolegal Suggestions. (Continued). Thos. H. Hancock.
140.—Importance of Railroad Hospitals. J. M. Thomas.

**Carolina Medical Journal (Charlotte), May.**

141.—Report on Progress of Rhinology and Laryngology. Edward F. Parker.
142.—*Surgical Treatment of High Myopia, with Report of Case. Charles W. Kollock.
143.—Abscess of Liver, Operation, Recovery. Wm. M. Love.
144.—Epidemic of Poliomyelitis. W. P. Ivey.

**Georgia Journal of Medicine and Surgery (Savannah), May.**

145.—Amputations from Standpoint of Railway Surgeon. W. H. Elliott.
146.—Abdominal Versus Vaginal Section. J. G. Carpenter.
147.—Hydrophobia and Necessity for Pasteur Institute in Georgia. Henry R. Slack.
148.—Ovarian and Tubal Disease as Factor in Excessive and Prolonged Menstruation. Edward N. Liell.
149.—*Pseudoleukemia—Report of Two Cases. A. H. Ohmann-Dumesnil.

**Canadian Practitioner and Review (Toronto), May.**

150.—Some Cases of Intestinal Obstruction and Strangulated Hernia and Their Treatment. A. T. Hobbs.

## AMERICAN.

1. **Microbes—What Are They?**—Graham holds that the bacteria are low forms of life, derived from the protozoans, and that they are practically identical with these simple forms of animal life.

2. **Estivo-Autumnal Fever.**—Veazie discusses the treatment, the main stay of which is quinin, that must be taken in forms easily absorbed. Aside from quinin, the treatment should be expectant, and the patient should be closely watched. During an epidemic or where the disease is prevalent, small doses of quinin aid the prophylactic effect. Those subject to malaria should avoid night air, keep their systems in order, drink wholesome water, and secure a proper amount of sleep under a mosquito-netting. He gives also his reasons for considering the disease entirely malarial. See also abstract in THE JOURNAL of June 2, ¶ 11, p. 1436.

3. **Furunculosis.**—Langemann holds that in addition to the ordinary cause by the invasion of staphylococcus aureus into the skin, there is a nervous element in the production of furunculosis, and thinks that it is possible that this is present in all cases. The method of treatment described is the galvanic current. The cathode is placed on the furuncle, the anode somewhere in the neighborhood, and a current of 2 to 5 milliampères is applied for from five to ten minutes. As a rule, one sitting daily is sufficient. Lacking the galvanometer, the sensation of the patient may be taken as a guide; the feeling of a lively sting at the center of the boil, just as much as can be tolerated, indicates about the proper strength of the current. Almost all furuncles, when thus treated in their incipiency, abort. When a little pustule has been formed, this mass of pus is extruded, but no suppuration follows, and even in more advanced cases it is diminished. Where there is extensive suppuration, he uses a flat pledget of cotton, soaked in 1 to 1000 sublimate solution between the sponge and the skin. Under this treatment, some boils disappear after one or two applications, others require as many as eight. On the average,

four or five are sufficient. He notices the literature in regard to the use of electricity for boils or similar conditions, and only one author, Bigelow, speaks expressly of the use of galvanism for this purpose.

4. **Blood Diseases and Surgery.**—The various blood conditions are discussed in their relation to surgery. Simple anemia frequently complicates surgical disease, and when it exists to any marked extent, should contraindicate extensive operation. Mikulicz insists that operation should not be performed when the percentage of hemoglobin has fallen below 30. Symptomatic anemia is a condition complicating various disorders, especially of the gastro-intestinal tract, and, while it is of less importance from a surgical point of view, the preliminary disease must be looked after. Chlorosis is another condition which, when serious, is a contraindication to surgical operation. In malignant anemias, no surgeon would operate, though in Hodgkin's disease there may be a possibility of benefit from operative treatment, and he reports a case. The importance of leucocytosis as a symptom of pus formation is noticed and the conditions in which it occurs. The treatment of anemias depends largely on the use of iron, and Van Schaick gives the report of cases so treated.

5. **Diphtheria.**—The points made on diphtheria, by Jervey, are the occasional atypical course of the disease, the existence of what is called latent diphtheria, and the occurrence of a mild chronic type, with or without membrane, though when this occurs it is usually limited to the nose and nasopharynx. He reports a case and refers to a similar one reported by Baber, of London, as supporting the existence of this type, which is not conceded by writers of all modern text-books. In some forms of this disorder, it is not possible to positively diagnose the disease, and he mentions the complications with other conditions and the possible relationship between rheumatism and diphtheria, believing that the diphtheria bacteria may sometimes be responsible for rheumatism. He points out what should be regarded as suspicious in any case, difficulty of swallowing, fever, enlarged glands, and albumin in the urine. For treatment, he speaks of the method of preventing infection and the use of antitoxin for prophylactic and therapeutic purposes.

7. **Insane Hospitals in Mental Diseases.**—Paton points out the value of pathologic studies in insane hospitals and the necessity of giving personal daily attention to the condition of each patient, also the need of keeping in touch with the scientific work throughout the world. The method of employing internes, as at the Worcester Hospital, is commended as a course that should be followed. He thinks that the future study of mental diseases in America will be governed by the answer to two questions in regard to hospitals: 1. Will these institutions demand and employ only the best and most skilled workers who can be found? 2. Having obtained their services, will these institutions give any return in the way of time, opportunity and facilities for working out these problems on which will depend so largely the welfare and happiness of the whole human race?

8. **Genito-Urinary Diseases.**—Guitéras describes his method of examining and recording cases of diseases of the genito-urinary tract and publishes his case-blank and schematic plans.

9. **Registration of Tuberculosis.**—Flick considers that the first step in the prevention of tuberculosis is registration. The disease is contagious, that is, its germ goes from one host to another without passing through any intermediary host or culture-medium, and this point must be considered. The intensity of the contagion is in proportion to the intimacy of contact. In every sense it is contagious, and in none infectious. The individual liability is to be considered and the intensity of contagion is not as great as that of exanthemata, but it more than makes up for this by its duration. If tuberculosis lasted no longer than smallpox or scarlet fever it would probably die out, but its contagion is a lasting, not a temporary, one. He maintains, therefore, that it should be as much subject to registration as are other diseases which have long been thus treated. If tuberculous patients decline to enter sanitariums and hospitals, the contact can be sufficiently controlled for preventive purposes by the enforcement of specific rules, and maintenance of personal cleanliness. Lack of attention to this should subject the individual to commitment to a hospital or sanitarium. He claims that fomites are a frequent means of spreading the disease, and that the efforts that are made at present in the way of prohibition of spitting, etc., are misdirected. Spitting is a necessity for the consumptive, so he demands that it should be prohibited only in public places, street-cars, sidewalks, etc. In conclusion he says that without registration the prevention of tuberculosis can not be placed on a scientific basis because the requisite data can not be obtained, and that registration is necessary in order that: 1, contact may be controlled; 2, the creation of fomites may be prevented; 3, fomites may be sterilized and 4, innocent parties may be given an opportunity to protect themselves against contamination in dwelling places. Many cases of tuberculosis are undoubtedly contracted in contaminated houses, and this mode of distributing the disease can not be stopped in any other way than by registration.

10. **Asthma.**—By asthma, Faulkner means a spasm of the bronchial tubes, and peribronchial hyperemia, approaching or amounting to inflammation, accompanied by râles on both inspiration and expiration and great difficulty of breathing. The term is applied to the paroxysm alone. Different forms of it are discussed, and, in the treatment, he suggests the local use of strychnia by intralaryngotracheobronchial injection, of from .02 to .25 gr., *pro re nata,* not oftener than twice in twenty-four hours. To prevent the return of paroxysms, he advises exercise of the respiratory muscles; removal of all exciting causes and toxic influences, such as dust, irritating plants, odors, etc.; the restoration of general good physiologic conditions of digestion, respiration, circulation, nervous system, etc.; removal of reflex irritation, nasal, rectal, and uterine; relief of bronchial hyperemia and bronchitis; repair of emphysema, and climatic suggestions. Asthmatics should wear woolen undergarments throughout the year, and their skin should be stimulated by salt baths and friction. Climate is largely a matter of individual peculiarity.

11.—See abstract in The Journal of March 31, p. 815.

12. **Prognosis in Fractures.**—The general assumption that simple fractures do well is questioned by Herrick, and he points out the need of acquainting the patient in regard to the state of affairs, so that a perfect understanding may exist, and that that which is broken can never be restored without leaving some blemish. No man should ever say to his patient that his leg will be as good as ever, for it will not be, and he should be made to anticipate the surety of a permanent defect as a natural consequence of a broken limb.

13. **Arsenic in Cancer.**—The method recommended and described by Trunecek consists in the use of an alcoholic solution—50 per cent. alcohol, 50 per cent. distilled water—of arsenious acid the strength of 1 to 150, which is painted over the surface of the cancer with a brush. The eschar gradually becomes black and finally detaches itself and is thrown off after repeated applications of the solution, the strength of which is gradually increased up to 1 to 80. After it has fallen off, another application is made and if a yellow crust is produced which is readily detached without hemorrhage, nothing further need be done; but if a dark, undetached eschar appears, the treatment should be continued until the last cancerous cell has disappeared. Trunecek describes two cases that were cures, and sums up the mechanism of the treatment as follows: 1. The cancer cells are first of all dehydrated by the alcohol, and then their protoplasm coagulates in the presence of arsenic. 2. The cells of cancerous connective tissue—cancerous stroma—degenerate and provoke a serous exudation, which in its turn determines alteration in the cells mummified by the arsenic. 3. In the surrounding healthy tissues a circumscribed inflammation is set up by the remedy, which always goes on to suppuration, and by means of which the neoplasm is first cut off from the circulation, and is finally eliminated from the organism as a foreign body.

14. **Cystic Tumors of Testis and Epididymis.**—Bullitt describes the types and variations of hydrocele and epididymal cysts and illustrates by schematic drawings. He thinks that

the epididymal cysts may originate as retention cysts due to dilatation of seminal tubules, as new formations in the connective tissue from rupture of one of the tubules, and from certain fetal relics such as the parepididymis, vestiges of the duct of Mueller and the vas aberrans. These cysts are slow in development and may cause such slight discomfort as to scarcely demand relief. Simple evacuation may produce a cure, or the injection of iodin or carbolic acid may be practiced, but the best method is to dissect them out.

15. **Health Conditions in Hawaiian Islands.**—Davis describes the general topography and climatic conditions of the Hawaiian Islands, and the peculiarities of the population, and points out that in the city of Honolulu, owing to the mixed character of the population, some very unsanitary conditions have prevailed. While the island government is doing all it can to improve matters, there is much prejudice among the natives and Chinese residents that hinders their progress. When the sewerage system of Honolulu is complete, the marshes and stagnant waters filled up and the breeding of animals stopped in its limits, it will be the garden city of the world.

16, 17, 18, 19. **Medical Education.**—Eliot discusses the methods of medical education and points out the advantages of newer methods, or rather of the inductive method. He believes that a four-year course will not suffice unless methods can be improved and instruction condensed, but hopes that they may succeed in so doing. Councilman describes the methods of pathologic instruction of the Harvard Medical College in detail, showing its advantages and difficulties. The things that are prominently brought out, according to him, are: 1. That the mind of the student must be active and not passive. That he can only acquire knowledge by his own powers of observation and deduction; he can not acquire it by being told things. 2. That teaching should be individual as far as possible. That the central idea should be to give opportunities to the student, and to assist him in the effort which he himself makes. 3. That medical education should not be directed solely to teaching the medical art, but education in its true sense, the development of the individual, must not be lost sight of. Cannon speaks of the case method of medical teaching as viewed by the student. Burrell insists on the importance of the student acquiring as well as simply receiving knowledge, and thinks that the most marked advance is the use of the case method of teaching surgery. It will counteract the danger of making surgery too mechanical, as is the tendency of the present day.

20. **Section Teaching.**—According to Wentworth, the disadvantage or objection to section teaching is the large number of instructors required; the suggestion that it should be substituted for clinical lectures is also objectionable. That it may be injurious to patients or that lack of clinical material may interfere with such a course, is not probable, while its advantages are that it requires the students to do most of the work, and they learn systematic methods of examination, to state results, to make provisional diagnoses and defend them, and in this way to express their opinions. He thinks that it would be difficult to overestimate the value of such a course when combined with competent instruction.

21. **Membranous Colitis.**—According to Thomson, membranous colitis is not, as sometimes held, a nervous disorder, as it may be entirely independent of any antecedents of neurotic order. Its pathologic and clinical symptoms, however, do not point directly to the nature of the disease, but rather to what it is not. It is different from ulcerative colitis or catarrhal inflammations of any kind. It may be due to local irritations of various character; pressure of a uterine fibroid or horseback riding has been known to produce it, but the most common cause is prolonged retention of hardened scybala. The first indication in the treatment is to relieve the symptoms, and nothing is so soothing for the tenesmus, the cutting and bearing-down pains, and general abdominal distress as free irrigation of the colon with normal saline solution, to which may be added five drops of oil of peppermint to the pint. Three to five gallons with a te[illegible] ture of 100 F. may be employed with Kemp's rectal [illegible] once in twenty-four hours: care [illegible] [illegible]en, [illegible] all the fluid is returned. In some cases, he has derived benefit from using, at the end of the irrigation, a gallon of water in which from 60 to 100 gr. of resorcin has been dissolved, being careful that it is all expelled afterward. Once a week a pint of clean water with 30 to 40 gr. of silver nitrate may be used instead of the resorcin. Unfortunately all this is not curative, but it should not be omitted from the treatment. The best medicinal remedy is the small alterative dose of castor-oil. He gives it in emulsion, in which each tablespoonful contains from .5 to 1 dram of the oil, to be taken one-half hour before or one hour after meals. This should be continued for months and only intermitted when it seems to disagree. Nitrate of silver in quarter-grain doses combined with turpentin is sometimes serviceable when given three times a day. General indigestion is met with 5 gr. of resorcin in a solution of tinctura nucis vomica, a half hour after meals, supplemented by 10 gr. each of sodium benzoate and bismuth salicylate, in capsules, one hour after meals as intestinal antiseptics. The dependence of the disease on chronic constipation should be kept in mind and salines used to meet this condition. Daily massage of the bowels and attention to diet are also important. He excludes beans, corn, spinach and woody vegetables, and encourages the patient to eat meat, poultry, eggs, etc., and most cereals. On general principles he advises out-of-door exercise and change of scene to the country if possible.

22. **Tuberculosis.**—Trudeau describes the sanitarium treatment at Saranac Lake and gives a table showing the results, which are certainly remarkable. Of 113 incipient cases, 82 were apparently cured, 25 had the disease arrested, 4 were improved and only 2 did poorly. In 151 advanced cases 27 were apparently cured, 67 had the disease arrested 43 improved, 13 failed, and only 1 died. Of 59 far advanced ones 12 were arrested, 26 improved, 16 remained stationary, and 5 died. These figures include only the patients who remained eight months on an average.

23.—See abstract in THE JOURNAL of May 5, p. 1132.

24. **Pathology of Insanity.**—Wise gives the position of the state commission in lunacy in regard to the questions that have arisen regarding the state pathologic laboratory. He publishes the report of a commission consisting of Drs. Cowles, Blumer and Councilman. Its conclusions are: 1. The Pathologic Institute should be maintained, but reorganized on a basis that shall have systematic teaching as its main function. 2. It should teach the fundamental principles whose study and application must lead to the clinical, anatomic and chemical research necessary for the advancement in the curative and preventive treatment of insanity. 3. It should have as its director a physician who has had a training in clinical psychiatry, besides being a competent pathologist. 4. It should be located on property of the State, in a building of its own, as near to the metropolitan medical schools as is practicable. 5. As an essential of its teaching function its building should adjoin, or be a part of, a small hospital for the insane for the reception of acute cases and other appropriate for investigation. 6. Entrance into the medical service of the state hospitals should be conditioned upon previous training in the Pathologic Institute.

27. **Stricture of the Rectum.**—Krouse believes that nonmalignant rectal strictures are more frequent than has been generally, held and reports six cases. He does not find them always situated near the anus, but more often beyond the reach of the finger. In 20 cases, 12 were situated high up near the sigmoid flexure, 6 only near the anus.

29. **Alcohol.**—Trimble rejects the idea of alcohol as a food, and believes that its evil effects should remove it from any such category even when it is advantageous to a slight extent. Its use in medicine is discussed. He concludes by giving the rules of Armstrong, sanctioned by Graves, regarding the use of alcohol in fever, which he says have the general indorsement of the profession. 1. If the tongue becomes more dry [illegible] baked, alcoholic sti[illegible] genera[illegible] do harm; if m[illegible] 2. If the [illegible] ome[illegible] [illegible]er, they do [illegible] ood. [illegible] hot and [illegible] hey do [illegible] arm;

if more tranquil, they do good. To these Ringer adds a fifth: Alcohol does good when it produces sleep and quells delirium.

31. **Epithelial Growths.**—Engman speaks of the treatment of warts, condyloma acuminata, verruca senilis, epithelioma and rodent ulcer, and tuberculosis verrucosa cutis by formalin. He first cleans and softens the surface to be treated with hot water, benzin, salicylic acid plaster, etc., sometimes with peroxid of hydrogen, and cocainizes, if necessary, before applying the formalin. He has had success in nearly all these conditions when this method was used.

34. **Vasectomy.**—Harrison states that vasectomy has been shown to be especially effectual in the earlier stages of prostatic enlargement by effecting shrinkage of the glands and the restoration of the natural processes; that in cases where there is evidence to show that the prostate has in its degeneration assumed the form and structure of a fibrous growth, the conditions are such, provided the symptoms of obstruction warrant the adoption of other measures than catheterism, as to render some form of prostatectomy preferable to either vasectomy or castration; that where as a sequence of sudden or protracted prostatic obstruction secondary changes have taken place in the bladder itself, in the form of sacs, pouches, or trabeculation, the possibility of restoring its natural function by any means is extremely unlikely. Under such circumstances, the induction of shrinkage of the enlarged gland will do good in affording a readier access for the catheter and in removing spasms, pain or hemorrhage connected with this or other similar processes.

42. **Life Insurance Examinations.**—Adams calls attention to the importance of more thorough protection of the applicant for life insurance, in order to avoid excluding him when there may be conditions only temporarily suspicious. He suggests that the agent of the company or the family physician of the applicant should call his attention to the fact and that he be allowed a prior examination before going before the company. The various possibilities of mistake or injustice from urinary examination, for example, are discussed. No applicant should be rejected in reality, because he should know his condition in advance, and if there is a risk he should not apply.

44.—See abstract in our Therapeutics Department this week.

46.—Ibid.

51. **Urinary Anomalies.**—The first of the anomalies noted by Brown is the "simulative nephritis" occurring after operation on the kidney, by which he means a condition of the urine accompanied by blood-cells, numerous granular hyaline casts and considerable albuminuria immediately following operations of nephrectomy or nephropexy and clearing up afterward. None of the other symptoms of nephritis are present. The casts appear for only a few days at the most, and in all the cases the urine is perfectly normal before the operation. He discusses the possibility of the ether anesthesia and handling of the kidney as factors, and thinks it likely that of these the stitching and handling are the most important. The second condition noticed is that of post-operative glycosuria, he mentions three cases of this and thinks it probable that many would show this symptom, if properly examined. Lastly, he mentions a case of simulated diabetes in which sugar was found in the urine, but careful examination showed that it was cane-sugar and the case was one of factitious mellituria. He mentions this as the first case of which he has heard where diabetes was wilfully simulated.

52. **Acute Leukemia in Childhood.**—The case reported by McCrae was in a male, aged 3 years. He reviews the literature of similar cases and analyzes the symptoms of this rather rare condition. He emphasizes the importance of careful study of the anemias of early life and more careful attention to blood examination in diseases of children.

53. **Stone in the Bladder.**—Cabot remarks on the difference of opinion as regards the future of litholapaxy and discusses the operation, which is the one of choice in all his cases except in a few instances where for some reason it could not be used. He has done litholapaxy 122 times, suprapubic lithotomy 12, and perineal lithotomy once. In his 122 litholapaxies 6 patients died within a comparatively short time after operation. He details the cases to show that no other operation could have afforded a better chance of life. In his whole series, he has had but one serious accident and that was rupture of the bladder, and the patient recovered. The fear that many surgeons have of nipping the bladder wall is without basis and can be wholly avoided by having the bladder contain a proper amount of fluid and operating in the center of the base of this organ. The disadvantages of perineal lithotomy are occasional impotence, ocasional stricture, and rarely also fistula. Recurrence of stone after litholapaxy, he thinks, is not a serious danger if care is used in washing out the bladder ten days or a fortnight after the operation. In conclusion, he reproduces the exceptions to this operation, whch he published in 1889, and states that he has no reason to change his belief as to the value of litholapaxy in all other cases except where exist coincident bronchitis or other conditions rendering etherization dangerous. His mortality of 4 per cent. in a series of patients averaging 60 years of age is considerably less than can be expected from suprapubic lithotomy in a similar class of patients, and the avoidance of fistula and shortened convalescence are decided advantages.

54. **Recurrent Monstriparity.**—Under the head of "A Problem in Antenatal Pathology," Ballantyne reports the case of a woman, with congenital family tendency to malformation of the thumbs, who bore 7 children: 2 males and 1 female normal, 4 females either still-born, deformed, or congenitally weak and incapable of being raised. The anomalies of the thumbs were present in 3 of the children. The first 2 were boys and healthy, therefore, the tendency to producing defective births appears to have been to some extent acquired.

55. **An Improved Alexander Operation.**—Goldspohn describes a method of shortening the round ligaments. It resembles a modified Bassini hernia operation rather than the original one by Alexander. The celiotomy element is, he claims, necessary at least to the extent of careful digital exploration, in the shortening of every single round ligament in order to be sure no obscure formations or adhesions exist, and that there is no diseased condition overlooked; and that the round ligament proper pulls from the fundus uteri and not from the lateral portion of the broad ligament. The technique is described in detail, with a list of forty-nine cases operated on during 1897 and 1898. The advantages, aside from those already mentioned, are the practically no mortality, absence of hernia in normal conditions, chance of relieving other disordered conditions, the possible saving of the patient from a complete abdominal section and the freedom of any feature that will prevent functional activity of the genitals in after life.

65.—See abstract in The Journal of March 24, p. 750.

66.—Ibid.

67.—See abstract in The Journal of March 10, p. 622.

72. **Popular Medicine.**—McGraw's article is a criticism of the teaching of physiology in the schools and the popular education in medicine. He thinks that there is too much of the little knowledge that is a dangerous thing, and that many troubles are largely overworked in the popular information, as even in hygiene there are no universal rules that can be laid down.

74. **Neuroses in Children.**—Holmes calls attention to the defective methods of education as a cause of neurasthenic troubles in children and gives the following factors as of importance: 1. The neurotic condition not properly recognized by teacher or parents. 2. Failure on the part of principals or superintendents of schools to recognize the different abilities, etc., of different pupils. 3. Neglect of parents to study the mental peculiarities of their children to tell when the danger point is at hand. 4. The impossibility, under the present condition of medical practice, of properly instructing parents and teachers in regard to the dangers which beset the neurotic child.

75.—See abstract in The Journal of February 17, p. 428.

77.—See abstract in The Journal of March 10, p. 623.

78. **Intestinal Sand.**—Georg remarks on the rarity of reports of this occurrence and notices the leading cases in the literature. He then reports a case of his own observation and finds that the organic material which has been noted in the majority of cases reported as intestinal sand is vegetable

sclerenchyma. The variety depends on the nature of the food. True intestinal, like biliary or renal, sand is formed by a deposit from the secretions of the living body, and consists largely of the salts of lime, magnesium and ammonium, but the greater proportion of the so-called intestinal sand consists largely of the above-described vegetable products and a secondary deposit of a small amount of inorganic salts, including a few silicious particles.

79. **Ethyl Bromid.**—Parker speaks of the value of ethyl bromid as an anesthetic, his own experience having covered about one hundred cases in ophthalmic practice. He has never seen any untoward effects and thinks that we have in it an ideal anesthetic for general obstetric work and short operations, and that it is at least as safe as ether and chloroform and without their disagreeable features.

80. **Electricity in Menstrual Derangements.**—The following are the deductions of Campbell in regard to the use of electricity in menstrual disorders. 1. That electricity properly applied will always relieve pain. 2. That it will lessen excessive discharges. 3. That it will increase the menstrual flux if deficient. 4. That it is sedative, astringent, tonic, alterative, hemostatic or congestive according to the pole in action. 5. That it fills every indication in the treatment of derangement of that important function—menstruation.

81. **Therapeutics of the Nitrites.**—Parker reviews the uses of the nitrites as vasodilators in disorders of the arterial system such as angina pectoris, asthma, arteriosclerosis, Bright's disease, etc. He thinks that the size of the dose is of much importance; and that the usual method of administering 2 or 3 minims of amyl nitrite is in every way satisfactory. but that there is much fault to be found with the ordinary methods of administering nitroglycerin. Nearly every one begins with 1/100 gr. and increases it gradually; he thinks this amount too large, and has seen just as satisfactory results from half that dose, and without the disagreeable after-effects He believes another fault is the common custom of combining nitroglycerin with digitalis, which is wholly unscientific and illogical, since the action of one is immediate and temporary while that of the other is slow and continuing, and so to get benefit from the one, the other is liable to be used too liberally.

85. **Coccygodynia.**—After calling attention to the apparent neglect which this condition has received of late and its lack of mention in some recent text-books, such as those of Fritsch and Veit, Hirst describes the etiology and pathologic anatomy, as he understands it, also the symptoms and diagnosis. The technique of the operation is thus described: The skin over the coccyx is cleansed by the operator after the patient has been anesthetized. A straight incision is made in the raphe from the tip of the coccyx to the end of the sacrum, down to the bone. The tissues are separated by retractors, and, with heavy scissors, sharp-pointed and curved on the flat, all the soft structures are cut loose from the bone. The forefinger of the left hand inserted under the bone acts as a guide and protects the rectum. If there is ankylosis of the sacro-coccygeal joint, it is difficult to tell when the top of the coccyx is reached, and the mistake of leaving the coccyx behind is often made. The alæ of the first coccygeal bones are the best guides. The dissection must extend above these points. Into the cavity beneath the isolated coccyx a sponge is stuffed to catch fragments of bone or bone dust and to control hemorrhage. A chain saw is now slipped under the bone and pushed up so that it takes off the tip of the sacrum. Two or three to-and-fro movements sever the bone. The one vessel as a rule requiring ligation is the median sacral artery, which is tied with catgut. A drain of five strands of silkworm gut is laid in the rather deep wound, which is united with five or six interrupted silkworm gut sutures. The wound is scarcely distinguishable from the raphe after a few weeks.

86.—See abstract in The Journal of April 7, p. 876.

87. **Perforation in Typhoid.**—The following is the summary of Davis' article: The diagnosis is not always easy. A decided and sudden increase, especially of pain, in the abdominal symptoms associated with an abrupt fall of temperature, is diagnostic of perforation. Leucocytosis is likewise a confirmatory sign. Hemorrhage is accompanied with sudden fall of temperature, but not by a sudden increase of abdominal symptoms. Dulness in the right iliac region is not to be expected in cases of perforation. Localized impairment of resonance may be due to free abdominal fluid; change of position causes it to disappear. Localized pain and dulness may be due to a plastic peritonitis around the site of perforation. This may be observed in one case in ten, possibly one in five. It is impossible to recognize that a perforation is about to occur, and it is not necessary to operate before it does, but it is before collapse is marked. Typhoid fever patients when not in total collapse bear operation much better than was expected. Patients operated on in marked collapse are liable to die on the table. Washing out the abdominal cavity with hot normal salt solution, even if no perforation is present, seems to improve the condition of the patient at the time of operation, and to favorably influence the subsequent course of the disease. We should operate as soon as the diagnosis of perforation is made. It is less danger for the patient to run the risk of having an operation done during the first period of depression than to wait and run the risk of having collapse preclude all operative measures. In operating incise as for appendicitis, and not in the median or semilunar line.

95. **Diabetes.**—Beck thinks it highly probable that many cases of diabetes are due to bacterial influence. He bases this belief on the non-existence of uniform lesions after death, occurrence of disease between certain ages, its repetition in more than one member of the same family at the same time, its occurrence in certain races, the Jews for instance, and its endemic form in certain countries. He thinks that the soil suitable for the growth of diabetes is found in certain neurotics, drunkards, masturbators and drug habitués. The formation of such toxic substances as acetone and diacetic acid may be the direct outcome of bacterial activity. A systemic disturbance allows bacterial invasion and growth, and it in turn produces a poison which gives rise to further metamorphic disturbances. It may be that the production of fermentation in the intestinal tract by the bacteria is an intermediate stage in the formation of the diacetic acid. These toxic substances may originate during this stage, but not before its occurrence. He reports a number of cases treated in accordance with his theory, using liquor auri et arseni bromidi with apparently good results.

101.—See abstract in our Therapeutics Department this week.

106. **Transscapular Amputation.**—Senn reports two cases of malignant disease of the humerus, in which operation was performed by sawing across the neck of the scapula instead of removing the bone as a whole. He thinks that in this surgeons have gone rather too far and that in the future a distinct line must be drawn between cases in which it is absolutely necessary to remove the entire bone and a part of the clavicle and those in which a radical operation can be performed by resorting to transscapular amputation. One of his cases was also of interest as being a recurrence after twelve years, reproducing the same histologic picture as in the first infection.

107. **Medicine and Surgery in High Altitudes.**—After giving a general description of the climate of Wyoming. Reed describes some peculiarities of medical practice in this region. He finds a striking difference between medical and surgical cases in these high altitudes from those of lower level. The extreme bodily temperatures are notable; he has seen them range between afternoon and morning from 107 to 96 without any serious effects. In typhoid, hemorrhages are frequent and sometimes apparently serious and yet a good recovery occurs. In pneumonia, the low atmospheric gravity favors pulmonary congestion, which if not promptly relieved passes to hepatization and death by asphyxia. Frequently capillary pulmonary hemorrhage occurs and is a relief. Capillary bronchitis is a very common and fatal trouble in children, and the extreme dryness of the atmosphere desiccates the pulmonary secretions and makes it often necessary to moisten the atmosphere of the sick-room. Intestinal complications are also frequent. There are no two other diseases probably so fatal in high altitudes as are capillary bronchitis and pneumonia. Pulmonary tuberculosis is almost unknown. Shock is very much less serious and rarer than in lower a[illegible] and i[illegible]on is less to be

dreaded. He reports cases showing the little danger from apparently very serious infection in this region. Dry powder dressings are not advisable, as moist ones are necessary. For anesthesia he discards ether, as it is too irritating at the high altitudes, and uses chloroform instead, excepting when it is necessary to give it as an anesthetic during shock.

109. **The Patient in Colorado.**—Hershey advises the physician who wishes to recommend Colorado to his patient to observe the following rules: If the patient is bed-ridden, keep him at home. If it is a case of phthisis florida, Colorado is no place for him. If the pulse-beat is over 110, or there is a decided daily rise of temperature, guard your advice, and caution the patient only to try the climate. If there are large cavities, try a lower altitude than Colorado. Send the patient with a letter to some reputable physician, with the diagnosis and history of his case. Request a reply, placing the physician there on record. Advise the patient to take no exercise whatever until he has consulted his physician there. If the patient has incipient phthisis, do not wait until the disease becomes well advanced before sending him away. The earlier he reaches Colorado, the more decided are the chances for ultimate recovery.

113. **Tuberculosis.**—Leach calls attention to the value of the Murphy method of collapsing the lung, and reports two cases where it has been used to advantage.

120. **Limitations of Tuberculosis.**—The conclusions of Porter's article are: Tuberculosis is not a self-limiting disease, but belongs to the class of progressive and aggressive diseases, as nothing in it tends to recovery. It is limitable under certain conditions, which may be accomplished by sanitation and sanatoria and special hospitals in a general way, and in the individual by prophylaxis and early diagnosis, repair and restoration to normal function, by antiseptics and germicides and lastly by the production of artificial immunity. He has used the antiphthisic serum T. R., but does not use tuberculin, which he considers dangerous.

121. **The Therapy of Miscarriage.**—Turner does not believe in active interference in cases of abortion, and if the case is progressing favorably he would let it alone. If, after expulsion of the fetus, the afterbirth or membranes are retained by adhesions, and hemorrhage develops, he would introduce a Sims' speculum through which he could tampon the vagina with absorbent cotton, thoroughly pressing it up so as to control the hemorrhage, and allow the patient to rest. After fifteen or twenty-four hours he would cautiously remove the tampon. In a great majority of cases, the retained matter is removed with the fetus, and the case is practically through. In cases where the placenta is still retained, however, and the hemorrhage recurs he would re-tampon and use the faradic current to the fundus of the uterus. When the tampon is now removed, he would expect to find the uterine contents following it, or protruding from the os. By this method the patient is kept quiet and hopeful without nervous irritation or anxiety, and there are no wounds or abrasions to be treated and no open avenues for septic infection. In his experience of over thirty years, he has followed this treatment and has no ill results to record.

140. **High Myopia.**—Kollock concludes that operation is justifiable in most cases of 12 D. and over, in which degenerative changes have not caused floating bodies in the vitreous, retinochoroiditis, hemorrhage and beginning retinal detachment. The existence of these changes in a passive state should not be a contraindication in all cases. The best results will be obtained in children, young adults and in those whose parts are in a healthy condition. In all cases, discission should be performed a number of times in order that the absorption of the lens may be given a fair chance, which abates the dangers of retinal hemorrhage and detachment and does not seriously increase that of infection. Detachment and retinal hemorrhage are less apt to occur if the condition change gradually. The results in the way of increase of visual acuity and field far more than counterbalance the danger of operation when proper precautions are used.

147.—This article has appeared elsewhere: see abstract in The Journal of April 28, ¶ 150, p. 1055.

## FOREIGN.

### British Medical Journal. May 26.

**Vaginal Hysterectomy for Uterine Prolapse.** R. C. Chicken.—In this operation, it is aimed to secure a peritoneal adhesion high up so as to supply a new pelvic floor. The plan he recommends is a removal of only a part of the uterus and the unattached portion of the posterior fornix. In complete prolapse, the fundus of the uterus by its descent carries the posterior half of the bladder and ureters with it, so that the posterior wall becomes the anterior, and the anterior walls and sides are covered by the bladder and ureters. To guard against accident in operating, made liable by this condition, a sound is passed backward and downward into the bladder as it lies exposed in front of the uterus. The continual dexterous manipulation of this by an assistant shows the limits of the bladder. By the means of scissors, the bladder is dissected off the sides and cervix, the incision being in the uterine tissue; the points are now turned sharply backward and the uterus cut across at the level of the cervix and Douglas' pouch. Two fingers of the left hand are passed through into the peritoneal cavity, the uterine fundus is seized, retroverted, drawn down and amputated at the point of peritoneal reflection on its anterior surface, the broad ligaments having been previously seized with forceps and ligated. There is now left, attached to the base of the bladder, a solid piece of uterine tissue. On the breadth and firmness of union which this is able to make, enabling it to resist the downward pressure in micturition and defecation, depends partly the success of the operation. At this stage there is left the cervix and os uteri, hanging on to a long flap of mucous membrane and peritoneum, which is the stretched and useless posterior fornix. This is cut off close to the base, and to this raw surface at the base of the pelvis, the stump of the uterine tissue is easily brought in contact after the bleeding has been stopped and a posterior fixed attachment is secured. The parts are retained in position by gauze tampons. With this operation, he claims there is a broad firm union of fixed inelastic tissue to give fixed support to the neck of the urinary bladder. The points of advantage are: 1. A solid piece of uterine tissue remaining. 2. The transverse cut across the uterus, allowing of easy retroversion of fundus and facility of applying ligatures to vessels. 3. The removal of the whole of the floor of the Douglas pouch. 4. The incision in the posterior fornix being made as far back as possible, the resulting scar admits of no "play" between the bony pelvis and the neck of the bladder. The only part where special care is required is the dissection involved in separating the displaced bladder.

**Treatment of Puerperal Eclampsia by Diuretic Infusions.** Robert Jardine.—This writer reports the results of treatment in 22 cases of puerperal eclampsia by infusion of sodium chlorid and potassium bicarbonate or sodium acetate, to control the first spasms, and chloral and bromid as an immediate drug resource, and magnesium sulphate to clear the bowels. Hot applications were used to keep the skin active; but the most important part of this treatment is the saline infusions under the skin in the region of the breast, a dram of sodium bicarbonate or sodium acetate to the pint of normal saline solution, one to three pints being used at a time. Three of the 22 cases were hopeless from the first. Of the 5 deaths, including the 3 mentioned, 1 occurred from duodenal ulcer on the seventh day after treatment, the other from double pneumonia, gastric ulcer and acute enteritis. Omitting the ulcer case we have only 4 deaths in 22 cases. Of the 23 children, 10 were alive and 13 dead. In 2 cases they were macerated. Craniotomy and perforation were performed on 3, and 3 were too premature to live. Of the 10 full-term children, 2 were lost, as craniotomy had to be performed. No other treatment has given him as good results.

### The Lancet, May 26.

**The Wounded in the Present War.** Sir William MacCormac.—The writer reviews the surgery of the present war and compares it with the results of the Cuban contest. The Lee-Metford and Mauser bullets are practically the same in their effects, and the number of recoveries in the Transvaal War so far has been exceedingly large. At the beginning of the war, he did not anticipate any successful results from abdominal surgery, and his experience has confirmed his opinion, though he did not realize the comparative immunity of abdominal wounds from these bullets. He knows of one patient who recovered in spite of operation. He thinks that a number of recoveries from abdominal wounds, when not interfered with, were probably due to the empty state of the intestinal tract at the time of the injury, and that the rule in the future will be to give patients a chance to recover without operation. In the case of chest wounds, the principle of noninterference and antiseptic dressing was still more strongly affirmed, and he illustrates by a number of cases. Uncomplicated gunshot fractures rarely required amputation and very few resections were practiced. He saw only one, and the result did not promise well. He also calls attention to the number of lodged bullets, which also agrees with American experience. He speaks against active interference to remove bullets, which are usually better left alone, and in this he disagrees with Sir William Stokes, whose reasons he considers altogether insufficient. He thinks that the place of the female nurse is at the hospitals, not at the front.

**Operative Treatment of Simple Fractures.** W. ARBUTHNOT LANE.—The author notices the inaccuracy of statements in surgical works as to the relative frequency of various kinds of fractures, and the incorrect explanation given of their causation, such, for example, as fracture of the acromion, which he believes is much more frequent than is usually recognized. He points out the mechanics of fractures and notices the alteration of the axes of the bones and consequent disturbance of function. He calls attention to a condition which he calls traumatic arthritis, due to displacement thus produced. The supposition that the surgeon is able to "set" fractures satisfactorily and restore the original forms and function of broken bones by simple manipulation and splints is a myth. He insists that in simple fractures it is important to the individual that the original form of the skeleton should be retained, without any alteration in its mechanism. The surgeon should, failing to secure accurate apposition as determined by radiographs, cut down on the site of the fracture and restore the bones to their original condition and hold them there by wiring or with nails.

**Summer Diarrhea.** F. J. WALDO.—Waldo points out that the most satisfactory hypothesis of the cause of summer diarrhea is in the dust from the streets, and that the most important element in this is the excretions from horses. Narrow streets, permeable pavements and dry hot weather are specially favorable to the condition. Heavy rains and clean streets are advantages, and, in the systematic street cleaning, we may look for the most potent remedies or means of prevention. Another way will be the increase of horseless carriages. Other unwholesome sanitary conditions must have attention. He speaks of the part that milk plays in the causation of this disorder and to the defective conditions existing in regard to its sale.

**Congenital Word-Blindness.** JAMES HINSHELWOOD.—Remarking first that he has already published four different papers dealing with distinct varieties of letter- and word-blindness, Hinshelwood describes another variety, showing that the subject is not yet exhausted. He reports four cases of what he calls congenital word-blindness, a defect of the brain which renders it almost impossible for the individual to form visual memories of words and letters. The first and second cases of this condition were rather marked, but the recognition of figures was in both, especially the second, much better than for words. In the last two cases there was no difficulty in figures, which he thinks indicates that these memories are registered in different portions of the cerebral cortex. He believes that these cases are by no means as rare as the absence of recorded ones would lead us to believe. The fact is they are not recognized and the children are whipped for stupidity, when the trouble is a congenital and only partially remediable defect.

**Incubation Period of Plague.** FRANK G. CLEMOW.—The incubation period of plague is discussed by Clemow, who notices a number of cases bearing on this point. He concludes that the maximum period may be considered eleven or twelve days; where it is received by direct inoculation the period is not more than two or three days as a rule, and it may be as short as twenty-four hours. He appears to favor the opinion that in cases where the interval between exposure and the onset of the symptoms has been several weeks, the virus has been preserved in fomites outside the body.

**Inefficiency of Board of Trade Tests for Detection of Color-Blindness.** F. W. EDRIDGE-GREEN.—Holmgren's method of testing for color-blindness is again considered by Edridge-Green, who says that persons with normal sight may be rejected by it, and he criticizes especially the directions by Holmgren that we should ignore color names. A color-blind person names colors in accordance with his color perception and he emphatically denies that the name is guessed, as is often stated. A person with central scotoma will escape detection by the Holmgren test, and the red end of the spectrum may be considerably shortened without causing a failure by it. He describes his own methods, which he calls the "classification test" and the "lantern test," both of which are described in detail in his work on color-blindness.

### Revista Medica de S. Paulo (Brazil). April 15.

**First Gastrectomy in Brazil.** V. DE CARVALHO.—The success of the complete extirpation of the stomach in the observation reported warrants further intervention of this nature. The malignant tumor of the pyloric region had invaded the ganglia of the greater curvature, which showed in the preparation like a close row of large beads extending almost completely around this portion of the organ. The patient was fed with alimentary enemata and complained of great hunger. She is 46 years old, a mulatto cook, and will be kept under supervision.

**Etiology and Prophylaxis of Typhoid Fever.** VERGUEIRO.—The theory sustained by this writer, who has made a special study of the etiology of yellow fever in its haunts, is that the germs live in the infected subsoil of closely inhabited, unsewered towns. When they find a particularly favorable condition for growth—association with a fungus or whatever it may be—they become virulent and rise with the emanations from the subsoil and are inhaled or swallowed with the saliva after passing through the nose. He cites arguments to show that the immunity enjoyed by farms, plantations and sewered towns built on a clean foundation can only be explained by this etiology, which also suggests prophylactic measures, avoiding exposure to emanations from the subsoil after sundown, etc., advisable also for the prophylaxis of malarial infection.

### Bulletin de la Soc. Med. des Hop. de Paris, May 17 and 24.

**Suppurative Cerebrospinal Meningitis.** NETTER AND JOSIAS.—Nine recoveries from severe suppurative meningitis are reported. All the patients were treated by hot baths, 38 to 40 C., for twenty-five minutes every three or four hours, night and day. Lumbar puncture disclosed the Weichselbaum diplococcus in pure cultures, also in the majority of thirty nonsuppurative cases. The lumbar puncture was repeated as a therapeutic measure after three or four days. Large numbers of the pathogenic germs were evacuated in the fluid; they had evidently settled to the lowest portion of the cavity.

**Treatment of Pneumonia with Beer Yeast.** P. MARIE.—The fine results obtained with fresh beer yeast or the extract, levulin, in furunculosis have been mentioned in THE JOURNAL. Marie recently had occasion to treat a patient with pneumonia complicated with severe furunculosis. In order to relieve the latter he administered yeast, and found that the pneumonia was also favorably affected by it. The patient rapidly recovered, though the prognosis had been grave. He has since given it to seven other pneumonia patients with equally favorable results.

### Echo Medicale du Nord (Lille), May 13.

**Cholera at Antwerp,** 1892-4. E. TRETROP.—This issue of the *Echo* is devoted to the study of the epidemic of cholera at Antwerp in the years mentioned. The apartments were disinfected with sulphur fumes after thorough saturation of the air with steam; the combination of steam and sulphur rapidly killed the germs. The proportion of recoveries from the disease varied from 44 to 62.7 per cent. in different years. The benefits of artificial serum were strikingly evident in a number of cases in which it was the only treatment.

### Journal de Med. de Paris, May 13.

**Simple Methods of Sputa-Investigation.** A. Girard.—A dissolving fluid for the sputa, with none of the disadvantages of the usual media, will be found in the alkaline hypochlorites of sodium or potassium, especially Javelle water. Treated with this fluid the ordinary histologic elements come out clearly, and concretions of mucus having the shape of pulmonary alveoles are also noted. The technique is extremely simple; no heat is required. The sputum is placed in about ten times its volume of good Javelle water, diluted to a third, and shaken. In fifteen to twenty minutes the nascent chlorin has completely dissolved the sputum and the fluid is then centrifugalized and set aside to settle for twenty-four hours. The sediment contains all the solid matters in 2 or 3 cm. of chlorinated fluid. Five or six drops of normal solution of sodium or potassium transform the chlorin into sodium chlorid. The tube is filled with sterilized water and centrifugalized again, the sediment spread on a slide and the preparation finished as usual by the Ehrlich method.

### Presse Medicale (Paris), May 12, and 19.

**Pathogenesis of Mitral Nanism.** Gilbert and Rathery.—The special clinical type designated by these writers as mitral dwarfs was described in The Journal of June 2, p. 1441. They ascribe the etiology to a pure mitral stenosis, congenital or acquired very early in life. The heart is regulated to accomplish an abnormally small amount of work, and the entire body accommodates itself to this condition, as the function makes the organ. This adaptation is more or less complete, and hence the existence of malformations, anomalies in development. The nanism of the brain is shown in the special psychic conditions described. The chlorosis is due to the hypoplasia of the vascular system. A few similar instances of nanism have been observed with pulmonary stenosis and other heart troubles, showing that there is not only a mitral but a cardiac nanism. An organic lesion of the heart may thus exist and develop with no manifestations except those of a dystrophic nature, which at first sight would seem to have no connection whatever with the valvular affection.

**Musset's Sign.** A. Delpeuch.—The biographer of Alfred de Musset mentions that, in 1842, a slight involuntary jerk of the head was noticed, accompanying each pulse-beat, "the first symptom of the affection to which he succumbed fifteen years later, a lesion of the valves of the aorta." Two Italians called attention to this sign of aortic trouble in 1895, and Delpeuch describes two recent observations in which this rhythmic movement of the head was the only symptom to call attention to the aortic lesion, of which it is pathognomonic. The rhythmic jerk is evidently merely the propagation to a distance of the attempt of the aortic arch to straighten out under the influence of the arterial wave, as the loss of elasticity—whether from an aneurysm or endarteritis—opposes an obstacle to the wave.

### Progres Medical (Paris), May 5 and 12.

**Resection of Superior Maxillary Nerve.** R. Belin.—A severe, rebellious neuralgia of two years' standing was completely cured last November by the simple method of resection of the superior maxillary nerve, described by Poirier in April. The scar is scarcely visible, and mastication has not been interfered with in the slightest. The method is based on the anatomic facts established that the upper edge of the pterygo-maxillary fissure is from 2 to 6 mm. above a horizontal plane grazing the superior border of the zygomato-malar arch, while the external plate of the pterygoid process and the above fissure average about 4 cm. distance from the zygomatic arch. The pterygo-maxillary fissure is always perpendicular to the axis of the zygoma passing through the temporo-maxillary articulation, i. e., 1 cm. behind the angle formed by the axis of the zygoma and the external orbital process of the malar bone. The operation consists first in opening up the infraorbital branch through a separate incision, taking it up on a thread and tying it. The superior maxillary nerve is then reached through an incision 4 cm. long, perpendicular to the zygomatic arch, at the temporo-malar articulation—avoiding the temporal artery. The temporal aponeurosis is then cut, and lightly loosened to the right and left. A small gouge, held perpendicularly, is then worked through the fibers of the temporal and external pterygoid muscles until it comes in contact with the external plate of the pterygoid process, and emerges in the pterygo-maxillary fossa. A sound substituted for the gouge can not fail to touch the superior maxillary. The nerve is then loosened by pushing it down several times, pulling it up by means of the thread tied to the infraorbital branch. The nerve is then cut in the pterygo-maxillary fossa with the gouge or forceps, and the end is extracted by traction on the infraorbital thread. As soon as it is divided it follows the thread through the suborbital incision. The operation required forty minutes. The patient spat a little blood and there was slight conjunctivitis in the eye, but these inconveniences had all vanished, with the pain, by the third day.

**Morphi-Cocainomania.** P. Sollier.—The method of curing the morphin habit followed by Sollier is gradually to diminish the dose to complete suppression in four to six days with calomel purges every day and an injection of pilocarpin on the sixth, with exclusive milk diet. This promotes the physiologic mechanism of throwing off the morphin by eliminating the intoxicated elements, favoring in every way the glandular and epithelial desquamation, and proceeding as rapidly as possible, in order to induce a lively and thorough reaction on the part of the organism. Four to six days accomplishes the desired result, and he has never had the slightest menacing accident, never syncope, and he doubts whether any other method can compare with this in its certainty, rapidity, simplicity and the complete restoration of the health. He describes as typical a very severe case of a physician who had acquired both the morphin and cocain habits. The heart was normal but pulse rapid; the oxyhemeglobin was reduced to 4.5; over 50 cg. of albumin were noted in the urine, and there had been a recent uremic attack. The blood coagulated as it emerged, appearing like asphyxiated blood both in its aspect and in the spectrum. There was chronic infiltration of abdomen and thighs, also "prick" abscesses. The entire body was twisted and bent almost double, one knee flexed. During the six days of deprivation there were no ill effects noted, no tendency to syncope nor lipothymia. Appetite and sleep returned the fourth to fifth day. By the end of two months the patient had gained 22 kilos, returning to his normal weight.

**Pernicious Dysenteric Fever.** Kanellis and Cardamatis.—The long experience of the writers in Greece has convinced them that so-called pernicious dysenteric fever is not a morbid entity; the malarial infection has nothing to do with the essential dysenteroid catarrh. This process and malarial infection may coincide, but their only reciprocal influence is the debility each occasions. The term "pernicious dysenteric fever" should therefore be discarded, and the condition be known henceforth as the complication of malaria with dysenteric catarrh.

### Revue de Chirurgie (Paris), May 10.

**Wounds of the Rectum.** Quénu.—In this comprehensive study of traumatic lesions of the terminal portion of the rectum, Quénu supplements his article on wounds of the peritoneal portion, published January, 1899. The first indication in treatment, he observes, is to prevent infection; the danger of hemorrhage is less important. Recovery is the rule when the peritoneum is not involved. If the wound enters the rectum from without, the rectal wall should be sutured and ample drainage be established through the pararectal opening. In all cases the intestine should be kept in repose. When the wound involves the bladder the permanent sound is necessary. When rectoscopy and catheterization show that the peritoneum is involved, laparotomy and suture of the rectal solution of continuity are indispensable. Of thirty-six wounds of this class 33 per cent. of the patients thus treated died, while the mortality was 82 per cent. in the twenty-nine cases in which laparotomy was not done. In cases of wounds from firearms, the indication is to drain as amply as possible, and the best results were attained in cases in which the anal sphincter was incised to prevent stasis of fecal matter in the rectum. A large intrarectal permanent drain might possibly accomplish the purpose, combined with opium and means to induce constipation.

**Median Osteotomy of the Hyoid Bone.** M. VALLAS.—This simple, easy and essentially benign operation allows entrance to the pharynx and opens up the lower portion of this organ and the vestibule of the larynx much more extensively than other procedures for the purpose. It is especially serviceable in removing foreign bodies, benign, enucleable tumors, circumscribed cancers of the epiglottis and, chief of all, severe syphilitic constrictions in this region. It facilitates the ablation of intramuscular tumors of the base of the tongue, lipomata and cysts, whose extirpation by the lateral suprahyoid route is often difficult. It also offers the most favorable condition for ablation of the tongue. The transhyoid amputation is total, and is less serious than other methods by artificial routes. There are no remote inconveniences, no deformity nor functional disturbances peculiar to this method. Swallowing is accomplished without difficulty, as the muscles learn to compensate the absent member. There are no vessels of any consequence on the median line. The bone is cut with Liston's foreceps; when the halves separate, the opening can be enlarged with retractors to 4 cm. The epiglottis is drawn out and held with a thread. A drain should always be inserted in closing the wound, fastened by a pin or stitch. Cicatrization is always rapid. The soft parts hold the halves of the bone in contact so that direct suture of the bone seems superfluous.

**Centralbatt f. Chirurgie (Leipsic), May 26.**

**New Method of Sterilizing Catgut.** C. A. ELSBERG.—The chemical principle on which our New York confrère bases his method is that organic substances are insoluble in the fluids which precipitate them from their solutions. Albumin is precipitated by ammonium sulphate and hence it is insoluble in even concentrated solutions of this salt. Applying this principle to catgut, it is treated as described in Elsberg's preliminary communication summarized in THE JOURNAL of May 5, p. 1133, first with chloroform-ether and then with a hot, saturated solution of ammonium sulphate. It retains all its physical properties and the smaller sizes gain in strength. The sterilization can be repeated three to six times without injury. The sulphate crystallizes as it cools and can be used again and again. A table of tests shows the efficacy of the sterilization. The catgut was soaked for twenty-four hours in bouillon cultures of various bacteria and then boiled in the solution at 108 C. Even anthrax spores were killed in five minutes, and when a 2 per cent. carbolic acid solution was substituted for the plain water, they were killed in two to three minutes.

**Dermatologisches Centralblatt (Berlin), May.**

**Treatment of Acute Gonorrhea.** H. LOEB.—The capacity of the anterior urethra varied from 4 to 22 cm. in a hundred men examined. This fact imposes the necessity of individualizing for each patient the quantity of fluid to be injected in treating the anterior portion. Any amount over the capacity of this part will find its way into the posterior portion and set up inflammation there. For this reason Loeb never fills the anterior portion even to its full capacity; one-third to two-thirds is sufficient for the purpose. Another point in the technique is to rest the hand on the thigh while holding the injected fluid in the urethra. If the hand is not suspended it is liable to alter its position unconsciously, and possibly force some of the fluid into the posterior portion.

**Deutsche Med. Woch. (Leipsic), May 17 and 24.**

**Industrial Poisoning and Accident Insurance.** L. LEWIN.—The German laws for accident insurance cover "sudden injuries" received in the course of wage-earning work. Lewin asserts that the toxicologist sees in the chronic intoxication of a workman handling substances that may have an insidiously injurious action on his organism an accumulation of repeated "sudden injuries," representing a total entitling the workman to indemnity.

**Kraurosis Vulvae.** P. JUNG.—In 6 of the 60 cases of this affection collected by von Mars, carcinoma coincided with the kraurosis, and also in 1 of the 4 observations described in this communication. This seems to indicate the influence of preceding chronic inflammation in the genesis of the neoplasms. With the exception of this 1 case, the 4 observations terminated in complete recovery. Two were treated with excision of a narrow strip of the labium majus; the other by excision of the entire affected region, as it was a very severe case, with intense pruritis and chronic leucorrhea.

**A Case of Glanders.** ZAUDY.—The overseer of an estate entered Ebstein's clinic with glanders in its acute stage and died in fourteen days. None of the animals on the estate were known to be affected, but two horses later showed symptoms of the disease. No portal of entry for the infection could be discovered except inflamed tonsils.

**Blood-Pressure in Neuropathic Children.** P. HEIM.—Tests on nearly a hundred children, with Goertner's tonometer, showed that neuropathic symptoms and high blood-pressure usually coincided with a neurophatic heredity, while no physical cause could be found for the high pressure. If his results are confirmed by others high blood-pressure will be found an important aid in differentiating doubtful cases of neuropathy. The cause of the higher pressure is probably the facile excitability of the cortex, the constant condition of psychic excitement. The amount of pressure does not seem to be proportional to the intensity of the neuropathic symptoms.

**Improved Gastroenterostomy.** O. WITZEL AND C. HOFMANN.—The Bonn clinic has not lost a single patient out of the last 120 gastroenterostomies whose death could be imputed to the operation in any way, and this fine result is attributed to the improved technique employed. A rubber tube is introduced into the stomach through a buttonhole in the anterior wall and passed through into the efferent portion of the jejunum after the gastroenterostomy has been completed. The patient is fed at once and abundantly through this tube, which not only assists in restoring his strength, but has a still more important purpose in stimulating peristalsis and starting the natural evacuation of the stomach contents into the intestine, establishing the current in the right direction. The stomach function is usually more or less compromised in patients requiring gastroenterostomy, and a little assistance in this way is of the utmost importance and benefit. It avoids the danger of the collapse of the efferent intestine and the dilatation of the afferent portion with stasis of the stomach contents. The writers lay equal stress on another point in their technique: the patients are required to sit up the same day or the day after operation, or at least sit up in bed, and are warned that if they do not cough freely, no matter if it does hurt the operated region, they are liable to have post-operative pneumonia. They are ordered to take twenty-five deep breaths every hour, and if necessary an injection of morphin is made to enable them to breathe full and deep and cough up accumulated mucus. By this means post-operative pneumonia can generally be avoided. In Czerny's latest reports death was due to this cause in fifteen out of the twenty fatal cases. The patient is fed through the tube for eight to ten days and then feeding by the mouth is gradually resumed. The tube is usually left three weeks; it serves to keep the lumen expanded and promotes favorable adhesions even when no longer used for feeding the patient.

**Muenchener Medicinische Wochenschrift, May 22.**

**Recurrences After Operations for Gall-Stones.** H. KEHR. Reviewing an experience of 500 operations Kehr reports the remote results of 302 carefully followed to date. There has not been a true recurrence among them, i. e., a new formation of stones after all had been removed, but stones were overlooked during the operation in 19 cases: 11 times in 202 cholecystostomies; once in 104 cholecystectomies and 7 times in 82 choledochotomies. In one case two years after removal of the gall-bladder violent colic and jaundice terminated in the expulsion of two stones, each with a silk thread in the center. Twelve patients complained of oppression in the stomach region and colic after choleystostomy, and puncture disclosed a turbid gall containing the bacterium coli, two requiring the opening of the old cicatrix and evacuation of mucopurulent matters, cured by three weeks' drainage. These inflammation colics should not be ascribed to stones but to the progress of the cystitis favored by the interference with normal contractility of the organ after this operation. Kehr recommends draining for four to six weeks in all suppurative processes in the gall-bladder. He personally examined 248 patients for traces of hernia after making a fistula, and found it in only 12, or 21 in his total of 302 followed to date. He considers this a very favorable showing. Only one of his 500 patients has a persisting biliary fistula, and this is due to complicating chronic pancreatitis. Adhesions caused trouble in 33 cases, 4 after cholesystectomy and incision of the duct, and 29 after cholesystostomy, but the disturbances were comparatively slight. He received from 85 per cent. of his patients enthusiastic assurances that the operation had been a perfect success, and in nearly all the rest the complaints were transient. Cholecystectomy with drainage of the hepatic is his preferred method, supplemented by dietetic and water cures.

### Wiener Klinische Rundschau, April 20 to May 20.

**Perforation of the Uterus.** Braun-Fernwald.—An imposing array of instances of perforation or rupture of the uterus during gynecologic interventions has been collected by Fernwald. They demonstrate the necessity of extreme caution in even the most insignificant gynecologic operations. The consistency of the uterine wall often proves a disagreeable surprise. Instances are cited in which the weight of the sound alone, without pressure, was sufficient to penetrate the wall.

**Arthrodesis of Both Knees.** H. Propper.—The loose joints in both knees consecutive to paralysis, in a boy of 7, prevented his standing upright, and he could only drag himself along on all fours. The joints were operated on separately. The lad is now moving about on crutches, the knees in splints, a great improvement over his previous condition.

### Grece Medicale (Syra), April.

**Is Hemoglobinuric Fever Malarial?** J. Foustanos.—The physicians of Greece have made a special study of hemoglobinuric fever, and the consensus of opinion seems to be that the disease is not caused by malarial infection, nor exclusively by quinin. Cases have been known in which it occurred without the ingestion of quinin, and it is extremely seldom that the malarial parasites are found in the blood of persons affected. Quinin sometimes aggravates the hemoglobinuria; sometimes cures it. Usually, patients recover more rapidly without it. These contradictions are explained by the generally accepted assumption that in most cases of hemoglobinuric fever malarial infection is the predisposing, and the abuse of quinin the determining, cause, but exposure or physical overtaxation may induce it even without quinin.

**Hemoglobinuric Fever.** J. Cardamatis.—This important work is based on observation of 4022 cases of bilious hemoglobinuric fever. It states that the disease may occur without any manifestations of malarial infection at the time or previously, and without exposure of more than a few days to malarial influences. Some exceptionally malarial regions are entirely free from it. Children between 2 and 4, and aged persons, seem to be comparatively exempt, and no case has ever been known in a nursling. Pregnancy and confinement also seem to confer immunity. Becoming chilled is an evident cause in the production of the disease, and it is probable that the suppression of the functions of the liver from the chill is one important factor in the pathogenesis of the disease. Possibly the destruction of the corpuscles occurs in the liver instead of in the circulation. Nutritional disturbances, as from arthritism, arsenic, phosphorus, alcohol, quinin, syphilis, may produce a predisposition. The fever is not proportional to the importance of the other symptoms. No alterations characteristic of malaria could be discovered at the autopsy of persons succumbing to hemoglobinuric fever in many cases. He asserts, therefore, that it is a disease due to a special cause, but that it may develop conjointly with malarial infection, which, like arthritism, affords a favorable soil. He disapproves absolutely of quinin in the treatment, stating that the mortality of quinin-treated cases was 26.1 per cent. in the 3008 cases on record, while it was only 7.5 per cent. in those not treated with it. Quinin should never be administered unless the malarial plasmodium is found in the blood, and even then methylene blue is much better, as it not only destroys the parasite but favors the excretion of urea and uric acid and diminishes the amount of albumin. Europeans in the colonies, who use quinin freely in the prophylaxis of malarial fevers, suffer frequently and severely from hemoglobinuric fever, while the natives, who do not use this drug—"from fear of the hemoglobinuria"—are rarely affected.

**Physiologic Explanation of Menstruation.** N. G. Sachinis.—According to the theory proposed, the female organism—in complete harmony of energy and matter, like all living organic beings—is trained to lose a certain amount of substance in plethoric periods, in order that it may not become debilitated when pregnancy arrives and a portion of the substance is diverted to develop the fetus. The same quantity of blood that would be required for the nourishment of a fetus during pregnancy is eliminated in the menstrual flux. The female organism thus becomes habituated to the loss, which, without this preliminary preparation, would result in the debility of the mother, and consequent defective development of the fetus.

### Gazzetta degli Ospedale (Milan), May 13.

**Automatic Paquelin Thermocautery.** G. Ovio.—Paquelin's thermocautery is rendered automatic by the pneumatic attachment described in this communication. A two-quart cylinder with a bicycle pump arrangement to compress the air is connected by a small tube with a receptacle for benzin. Less than a minute's work with the pump will compress the air sufficiently for the cautery to work a couple of minutes. The benzin lamp is lighted and the valve turned to admit the compressed air. When the cautery becomes incandescent, the cover of the lamp is turned to a certain point and the apparatus continues to work automatically, without further attention.

**Improved Process for Preserving White Corpuscles.** S. Drago.—The disadvantages of the various processes of making preparations of the corpuscles stimulated Petrone and his assistants to seek some other fluid than those usually employed for the purpose. They finally succeeded in finding one that acts rapidly and preserves the constituents of the blood for prolonged observation, showing all the details of the structure of the white corpuscles with remarkably delicacy and certainty. This fluid is the ordinary Lugol's solution.

**Pathogenesis of Gastric Ulcer.** S. Saitta.—Two cases of gastric ulcer occurring after long gastrosuccorrhea in one and digestive disturbances in the other, both concomitant with a serious general disease of the nervous system, progressive paralysis or chloro-anemia and neuralgia, suggested to Saitta vagus of a predisposed soil. To test this theory he severed the that the gastric ulcer was due to abnormal innervation by the pneumogastric on each side in sixteen rabbits, and fed them with a weak solution of hydrochloric acid, which induced multiple ulceration in the stomach with general gastritis, while it had no effect on control animals with the pneumogastrics intact.

**Lymphosarcomatosis of Mother and Metastases in Fetus.** G. Berghinz.—Miliary metastases were found in the liver of a child delivered during the mother's death agony, as she succumbed to acute lymphosarcomatosis. Berghinz cites, in opposition to this, the case described by Pennati in which the blood and organs of a 6 months' fetus showed no trace of malarial infection, although the mother had died of malarial cachexia.

### St. Petersburger Medicinische Wochenschrift, May 12.

**Report of the Finland Sanitarium.** A. Feldt.—Sixty pulmonary invalids were treated at the Pitkaejaervi tuberculosis sanitarium in 1898-99, with 21 very much improved and 23 negative results, due in many cases to insufficient stay or intercurrent affections. The average stay was 66.7 days and the average gain in weight 10.02 Russian pounds. As most of the patients had passed the incipient stages of the disease, the results are considered very encouraging for this northern sanitarium.

### Gaceta Medica (Mexico), May 15.

**Pulverization of Mercury with Turpentin.** M. R. Loza.—If turpentin is put into a bottle with mercury and shaken, the metal will separate into the finest particles, which facilitates the preparation of salves, etc. The essence of turpentin used can be the cheapest variety, but the mercury will not become pulverized unless it is chemically pure. Turpentin can thus be used as a test of its purity.

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## Oration.

# A PROTEST AGAINST SOME OF THE EVILS IN THE PROFESSION OF MEDICINE.

ORATION ON MEDICINE BEFORE THE FIFTY-FIRST ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT ATLANTIC CITY, N. J., JUNE 5-8, 1900.

BY J. A. WITHERSPOON, M.D.
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The honor of delivering the annual address on general medicine, which you have seen proper to confer on me, is one which I fully appreciate, and I now take the first opportunity presented to express to the Association as a whole my grateful thanks for so distinguished an honor.

I also take the liberty of hoping that what I may say at this time will receive the hearty approbation of this large body of representative men. Nearly all of my predecessors have spoken of the wonderful progress and brilliant successes of the profession, and, indeed, they have been truly marvelous. The latter half of this century has been one grand triumphal march to the present high plane of rational, scientific, preventive medicine, until to-day we are utilizing every element in nature to solve the many problems of disease.

Chemistry, with its fixed laws of precision, is now receiving its proper recognition, and clearing many hitherto unknown fields of empiricism and doubt. The modern laboratory, with its multiplied methods of investigation, has done much to lift the veil of ignorance and mysticism which has so long obscured the true etiologic factor in many diseases, and made preventive medicine the grandest achievement of the age.

The modern methods of differential diagnosis, more accurate clinical observations, confirmed by pathologic investigation, have done much toward making medicine an exact science.

We are justly proud of these accomplishments, and when we think of the vast army of laborers in this noble work of humanity and the daily spreading of this wonderful store of information broadcast through the medium of modern journalism, making it possible for the most obscure country doctor to keep fully abreast of the times, and by this means to acquire more knowledge in one year than could have been attained in a life-time, a century ago, we have every cause for self-congratulation.

But it is not the object of this address to linger over these bright, golden fields, except to express my thanks and grateful appreciation to my brothers in the profession. I deem it the proper time and place to call attention to some of the most grievous fallacies and hurtful errors that have fallen into the ranks during the onward march, in some instances obstructing the path to true and honorable progress. I am well aware that it is not politic at these annual reunions to call to mind unpleasant things, but we have a high and noble calling, the untarnished honor of which has been placed in our keeping by our illustrious forefathers in medicine, the protection of which should be as a sacred trust; hence, I dare strike the alarm-bell and call to arms those who are resting in a security born of a sense of duty well done. The old guard have long stood at the helm and safely guided the grand ship of honorable medicine into a harbor of calm where the Code of Ethics offers immunity to quacking, pathies and commercialism. But, while they are taking a well-earned rest, dark clouds have arisen, and threatening waves are breaking over the old ship. Therefore, I may be pardoned if I do not follow in the footsteps of some of my predecessors in omitting the advances of the past year, my excuse being an honest conviction of the necessity, and an earnest desire, without malice, to protect the profession from the hurtful tendencies of the times.

### DICTATION BY PHARMACAL COMPANIES.

The first stupendous error, one which is so vast in its influence that it hangs like a withering blight over the individuality of every man in the profession, is the dictation of the innumerable pharmacal companies, the self-constituted advisers in the treatment of diseases about which they know nothing, to the entire profession. All honor to worthy and legitimate scientific pharmacy; we should welcome it as a child of medicine, but as is often the case, the child, as soon as it is out from under the wing of the parent, has grown "bigger than the daddy" and not only tells him how to treat every disease to which flesh is heir, but is condescending enough to formulate his prescriptions with full directions on them, many times omitting the formulæ, but always kindly telling him in what diseases to use them. They are so solicitious that they flood your office with blatant literature full of bombastic claims and cure-alls, and I am sorry to say, too frequently with certificates or articles used by permission from physicians who call themselves reputable. Of course, none of these doctors are members of this body, or even inhabitants of the United States; they live in our new possessions, or some other country without the privilege of resting in the bright light of the Code of Ethics of this Association—a code written by the fathers, broad and liberal enough for any true doctor to practice medicine under for a lifetime, without a blush upon his cheek.

But that is not all; these drug-houses are so afraid that some one will die through your ignorance or before dull comprehension becomes alive to the merits of their preparations, that they send a man, frequently a doctor who was a howling success in the profession before his health failed, to tell you all about how to treat disease. He leaves you with the parting injunction to always specify his preparations, and with the friendly warning to watch the local druggist—whom you know all about—to keep him from substituting, while he assures you that he and his firm—about whom you know nothing—are the personification of honesty, and that you can always depend upon them and their preparations, as the plants from which they are compounded were gathered by their special agent from the grave of Esculapius. And thus they come, with samples galore, until you are reminded of the old southern negro song, "They are coming father Abraham, forty thousand strong," to spread the glad tidings of joy, and make every doctor their walking advertising agent. They are the only people in the world who, without seeing the patient, can tell you how to feed the baby, until he blossoms like the rose, or how to restore the rosy-tinted bloom of health to the blanched cheek of the convalescent. They have an antiseptic that can chase the bacilli typhosi through the lymph-channels and pound them to death in the blood-vessels by throwing red blood-corpuscles at them, or the white blood-corpuscles are called up as a reserve, and the war of the roses is again enacted in the human body. Or, they make the emaciated consumptive so fat that he can hibernate and convert his distressing cough into a laugh of joy. Thus, I might enumerate indefinitely what great things they are doing for us, but seriously speaking, gentlemen, this is a curse to the profession, and takes from it its real scientific application, viz., treating each case upon its merit.

In my humble judgment, the fostering of these establishments is a disgrace to honorable medicine. The true sphere of pharmacy is to make the official preparations of drugs and compound our prescriptions. When a doctor acknowledges his inability to formulate his own prescriptions to suit each case, then he should seek some other occupation, more to his taste of commercialism, or less trying by reason of his lack of qualification.

These institutions have such powerful influence that every medical society meeting must furnish space for their wares, this frequently becoming a place of popular resort where various drinks are served, this taking from the meetings the interest in their scientific work. Yet they are not satisfied with this; it is reported that they have even gone so far as to insinuate themselves into the very body of some of the sections, and that at this meeting they propose to dictate and control the election of officials who are kindly disposed to the manufactured products of their laboratories. Can this be true? Can we rest under such an imputation and retain our self-respect? If these reports be true—and the journals are agitating them, and I have in my possession a letter from a drug house to a journal, making the charge—then, indeed, has the reputation of regular medicine descended to a lower level than I thought. We must have an investigation, and if these charges are true, the time has come for vigorous action. If there are those who are making our holy temple a house of merchandise, then we should drive them from our midst by the scourge of our indignation and contempt as did Christ the money-changers of Jerusalem.

### MULTIPLICATION OF MEDICAL COLLEGES.

Next, I desire to call your attention to the rapid multiplication of medical colleges in this country. In doing this I do not wish to ignore the great work that has been done by the profession through the development and progress of medical education. The notable advances of the past twenty years, such as lengthening the course of study, laboratory work, etc., have been inspired by the profession, and we have greater reasons to be proud, when we remember that these improvements have been carried out without assistance of large endowments, for very few even of our best institutions have had such aid. But, while we give credit, we must also lay to the charge of the profession the increase in poorly equipped institutions that have been born of no need, and that are fostered to no good end. This evil has become especially marked in our great cities. It has become a fad and a means of advertising to organize a poorly equipped medical college, both in teachers and modern means of instruction. The result is cheap notoriety, half prepared students, cheap rates and cheap doctors who bring discredit upon the profession and death to innocent people and who, as a last resort, go into politics and help enact laws harmful to the high standard of honorable medicine.

This induces young, inexperienced graduates to go immediately into a specialty, without experience or special fitness, which is never justifiable. No man is prepared to go into any special field until he has done general work enough to familiarize himself with disease in all of its phases, and neglect of this training is responsible for so many extremists who never temper their thirst for notoriety with common sense. It is this which has caused the loss of many lives and much unnecessary mutilation of the human body. It is this that gives birth to fads and faddists. It is more than probable that the appendix of our forefathers occupied a position downward from its cecal attachment until the surgical dictum went forth, "No man is a perfect man, so long as he has his appendix." Now you find this troublesome little remains of the "missing link" has left its normal habitat and hidden behind the cecal pouch.

Again, take the spectacle fad. Glasses in the past were an insignia of honorable old age; now we truly find them from the cradle to the grave. Even the negro "coon," who has been noted for keenness of vision, following the uncertain meanderings of the opossum with unerring precision during the dark of the moon, or seeing a chicken on the highest roost the darkest night, must now have "specs" to walk the streets in broad daylight.

All honor to true and legitimate specialism; it should be welcome and aided by every general practitioner, as a scientific and correct division of labor in a field broad enough for all, but, this rushing into specialism without the above preparation is truly appalling, and, in my opinion, is injurious, not only to the general profession, but to the truly well-equipped specialist.

### LABORATORY DIAGNOSIS.

I desire to call attention to another serious error which seems to be the popular tendency of the times. I refer to laboratory diagnosis regardless of clinical symptoms. The microscopic demonstration of the presence of etiologic germs of a disease is not sufficient for diagnosis, but only confirmatory; the clinical manifestations should be present, and the close and careful observer at the bedside must remain the highest court, and chemical and microscopic tests his aids. I believe in adhering to bedside experience. The considering of the case in all its details—history, tendencies, vitality, general aspect, physical signs, subjective and objective symptoms—aided by the microscope and modern methods of research, when needed, is the only way to practice medicine with justice to yourself and safety to the patient. It is an unfortunate fact that many laboratory men know the habits, morphology and methods of culture and staining of pathogenic bacteria far better than they understand by experience or observation the diseases these bacteria produce. We must not lose sight of the fact, while it is right and gratifying that this work is being done and is of great value to medicine, that our true mission is to save human life.

### MEDICAL POLITICS.

Here let me express my earnest condemnation of medical politics. I am old fogy enough to believe that we should confer honor upon those to whom honor is due; any method of wire-pulling or resorting to the tricks of ward politicians is unbecoming, and should not exist in a medical body, especially in this, the largest and most influential medical society in the country. It can only bring discredit to its members and cripple its usefulnesss. Here, the queen of professional ethics should reign supreme, and, by the light of example, shed her beneficent luster upon the world. The man of true merit, to whom his professional brethren would naturally turn when honors are to be conferred, is often overlooked because his modesty prevents him from advancing his own interests, while men of less ability, but more pull, are placed in positions of honor. This should not be.

One of the most grievous and dangerous errors is the present system of quarantine against epidemic diseases. I refer to local boards of health acting independently, often composed of most inefficient men who owe their position to political preferment rather than to any special fitness for the place. State boards acting independently of other boards are largely responsible for the shotgun quarantines, useless disturbance of business and often ineffectual attempts at protection.

If there is any one department of medicine which stands pre-eminently in the front rank of advancement in this progressive age it is preventive medicine, and, with our increased knowledge, it is a reflection that any serious epidemic disease should gain a foothold on American soil. The only way to prevent this is by giving the power to a National Board of Health. Away with the old political cry of state rights when the lives of our people are threatened. Let us place the strong arm of this government around this land, unhampered by petty jealousy and minor boards. We are confronted by a serious and grave question involving this very principle. Even now, at the Golden Gate, which has always stood wide open to welcome the stranger, that fearful scourge, bubonic plague, has insidiously gained admission. This Association has time and again, directly and indirectly, expressed its views upon this subject, and appealed to the nation through its representatives, but as yet, the full measure has not been meted out. When war with Spain was declared, millions of good "coin of the realm" was voted, and a million men stood ready to enlist and fight for the flag of the grandest country on earth. And yet, a disease is threatening us now, which has claimed more victims than the combined armies of the world, and finds us unprepared to properly meet it. We must make united efforts in the establishment of a National Board of Health, clothed with legal power and supplied with the necessary funds, to protect our people from these threatened invasions of the pestilence that stalketh by night, and wasteth by noonday, peering with his grim face and shaking his matted locks, while from his parched lips he emits the gibberish of a foreign tongue. When armies and strong men falter, and tardy statesmen sit with faces made pallid by fear and guilty conscience, then the world will turn to us, as the protectors of human life, to buckle on our armor and advance to meet the foe, and we must be prepared to do as our profession has always done—advance with a cool head, a brave heart, and unselfish love for our fellow-man.

If by united effort we can get Congress to see that no department, not even the Treasury, is more important than the health of our people, and if we can have our Chief Executive appoint the man for the position, allowing the same assistants and clerks as that of any other of the departments, then we shall be able to stop the invasion of foreign disease, and surely every patriotic citizen can trust the President, regardless of politics, under proper laws enacted by our representatives, to solve this weighty problem.

### INDISCRIMINATE USE OF NARCOTICS.

We should at this time sound a note of warning upon the growing tendency on the part of many physicians to use morphin and cocain indiscriminately. There are but few men here of wide experience who do not daily come in contact with practitioners whose panacea for everything is opium in some of its forms, and while I regard it as a wonderful remedy, capable of great good when judiciously used, I am bound to say that when used as it is by some doctors, it is productive of terrible results. The morphin habit is growing at an alarming rate, and we can not shift the responsibility, but must acknowledge that we are culpable in too often giving this seductive siren until the will-power is gone, and a moral and physical wreck is sent down to shame and degradation, often committing crimes while in the toils of his perverted nature. Nor do the fearful results stop here; too often these tendencies are transmitted to the offspring and these innocent victims are brought into the world, half-made mentally, morally and physically, thoroughly unfitted for the many emergencies of life. Ah, brothers! we, the representatives of the grandest and noblest profession in the world, with the God-given mission of making growth more perfect, life more certain and death more remote, must shoulder the responsibility, follow in the footsteps of the Great First Physician, and warn and save our people from the clutches of this hydra-headed monster which stalks abroad throughout the civilized world, wrecking lives and happy homes, filling our jails and lunatic asylums, and taking from these unfortunates the precious promises of eternal life. The hypodermic "shot," as it is affectionately called, is too often given in a stomach-ache, when a dose of oil is needed, or to relieve painful menstruation month after month, until the bright, rosy-tinted cheek of health and the brilliant eye of youth and healthy young womanhood give way to the dry, pigmented skin and the leaden, expressionless eyes of the morp[illegible] [illegible] a life full of promise and usefulness is [illegible] Why seek and remove the cause [illegible] of ills for which morphin is given, and thus avoid the spectre which, if you are a conscientious physician, will follow you through life, and like Banquo's ghost, will not down? The same can be said of cocain, which is rapidly becoming a national evil, because of its indiscriminate use in minor surgical operations, and of the unnecessary and hurtful information too often given the laity of its seductive influence on human beings.

### USELESS MULTIPLICATION OF BOOKS.

In approaching the next subject, I feel, before this body, like following the example of the great lawgiver and taking off my shoes, for I realize I am on holy ground. But remembering the maxim of one of the pioneer heroes of my native state, "Be sure you are right, and then go ahead," I have determined to offer my feeble protest against the useless multiplication of books and authors. Every progressive man in the profession feels the necessity of keeping fully abreast of the times, and when a new book is published, will purchase it for fear he may lose some valuable information, too often, to find many of them poor copies of other works, without an original thought, or any necessity or reason for their existence, except perhaps, the ambition of the author. Every medical library, public or private, is groaning under its load of useless repetition, in systems of many volumes. There is a prevailing tendency amounting almost to mania in young men, to rush into print, and I feel that I can talk freely to them, being one myself. This is especially true in our great cities, for, how often do we see a young graduate, after staying in a hospital a year, and then in a laboratory a short time, suddenly unfurl his banner to the world as an authority, and while his English is excellent and his diction perfect, I doubt whether his experience warrants him in assuming the grave responsibilities of an authority on any subject where human life is at stake. I would not be understood to mean that the young men should remain in the rear and withhold any information they may have acquired by arduous labor, nor would I check their worthy ambition or pluck one laurel from their brow, but I do claim their medium should be the medical journals, which are, after all, the greatest educators of the busy physician. When such a man as Osler, a walking encyclopedia of medicine, regrets the day when he sold his brain to the medical publisher, it is time for younger men to pause and consider before they assume the rôle of authorship.

In conclusion I desire to say that a conscientious sense of duty alone induces me to call attention to the threatening storms which, if not checked, while they are yet young and harmless, will eventually undermine the very foundations of true and honorable medicine. Mr. President: when all of these injurious things have been forever eliminated, and the regal robes of ethical medicine rendered aseptic from their present pollution, then we can exclaim with pride, "Sound the loud timbrel o'er Egypt's dark sea, Jehovah hath triumphed; his people are free."

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A CHARLATAN was plying his trade at Zittau, a town in Saxony, advertising extensively throughout the country, when the physicians combined and secured his arrest, on the ground of "unlauteren Wettbewerb." The local court acquitted him, but the physicians carried the case to the higher court in Dresden, which condemned the quack to 400 marks fine and forty days' imprisonment.

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# Address.

## THE IDEAL PHYSICIAN.*

BY W. W. KEEN, M.D., LL.D.

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PHILADELPHIA.

When casting about for a suitable topic on which to address you, I was much perplexed at first, but finally bethought me that perhaps I could not do you a better service than to sketch in very brief outlines the characteristics of the ideal physician. Let me address you therefore as aspirants for the realization of this ideal.

Few of us, perhaps, at the close of life, can say that we have realized our ideals. But unless we have a high ideal, the trajectory of our life will never have risen to any noble height. "Hitch your wagon to a star," said Ralph Waldo Emerson. Even though you fail you will more nearly reach the firmament than if you had never made the attempt.

The physician may be regarded from three points of view: 1, his personal life; 2, his professional life, and, 3, his public life.

*Personal Life.*—The ultimate basis of esteem is personal character. Wealth for a time may lend its glamor; intellectual attainments for a time may dazzle the judgment; power for a time may achieve apparent success, but when the testing time comes, as come it must to every man when some great temptation to do wrong confronts him, wealth and intellectual power are as if they were not; character is the one thing that tells in this life and death struggle. Having that, you will win the fight and be crowned with the laurel of victory. Wanting that you will succumb, defeated and dishonored. The struggle may be a public temptation known of all men, and if you fall your fall will be like that of Lucifer; or it may be hidden in your own breast, known only to God and yourself; but if you win, the victory is just as great as measured by the eyes of Omnipotence, for a character has been saved and strengthened; a true man has attained his growth.

It is due, I am glad to say, to this prevalence of high character that our profession has won such a lofty place in the esteem of the community. Its purity is almost never impeached. Remember that every time you are alone with a woman-patient in your consulting room, with every eye barred out, she gives her honor into your hands and in turn you place your reputation unreservedly in hers. A whisper will destroy either of you. In my opinion, it is the highest tribute that can be paid to the character of our profession and equally to the credit of our patients that this mutual confidence is so seldom abused and the tongue of scandal is so seldom busied with noxious tales. When you remember that there are over one hundred thousand physicians in this country with daily possibilities of wrong-doing, is it not marvelous that this sacred trust is so jealously conserved?

Greatness of character finds its best expression in kindness. To no one are so many opportunities for this fine trait given as to the physician. In the heyday of health and happiness he is not needed, but when sickness and weariness and woe come, when the bread-winner may be taken, or the loved mother's gentle life may be in peril, or a sweet little child in whom is centered all the tenderness of unbounded love is lying ill, and death seems to dog the doctor's footsteps, then the trusted physician, wise of head and kind of heart, is indeed a welcome visitor. Then can his gentle touch give assurance; then can his sympathetic voice bring hope; then can the thousand and one acts of thoughtful kindness bind to him for life the anxious hearts looking to him as the messenger of life. Even in the daily routine of a hospital clinic, a kind word is often better than any medicine.

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*The Commencement Address delivered to the students of Rush Medical College, in affiliation with the University of Chicago, June 21, 1900.

Manners make the man. The boor has no place among us. The physician should never be the fop, but always the gentleman; never unclean of clothes or speech, but always neatly dressed and so careful of his words that he need not ask, as did one of General Grant's aids: "There are no ladies present, are there?" "No," was Grant's stinging reply, "but there are several gentlemen." Soiled linen and unclean finger nails are as much condemned by antisepsis as they are by decency. The flavor of stale tobacco smoke about his beard and clothes will never characterize the ideal physician, nor will indulgence in alcohol ever cloud his judgment or disgust his patients.

Make it a point not to let your intellectual life atrophy through non-use. Be familiar with the classics of English literature in prose and verse; read the lives of the great men of the past, and keep pace with modern thought in books of travel, history, fiction, science. A varied intellectual life will give zest to your medical studies and enable you to enter not unequipped into such social intercourse as will beget you friends and will relieve the monotony of a purely medical diet. Let music and art shed their radiance upon your too often weary life and find in the sweet cadences of sound or the rich emotions of form and color a refinement which adds polish to the scientific man.

I suspect the next characteristic of the ideal physician will meet with a ready assent—marry as soon as you can support a wife and the hostages to fortune who will make your home life happy beyond compare. But choose wisely and not too hastily. A bachelor doctor is an anomaly. He can not fully comprehend the hopes and fears and desires of parents. He knows not the lions in the path of childhood. Imagine if you can some sweet lassie confiding to him the symptoms of a heart disease which digitalis can not cure. The ideal physician is a good husband and a good father, and so will he enter into the lives and hearts of parents and children, not as a stranger, but as one who can partake of all their emotions, because he has felt the same joys, partaken of the same sorrows, loved as they have loved, and it may be, drunk to the dregs the same cup of loss.

But the ideal doctor lives also a spiritual life. You gentlemen will have to deal with the entrance and the exit of life. You must often ask yourself what and whence is this new *ego* that is born into the world; whither goes the spirit when it quits this tabernacle of flesh which is left to moulder and decay. The tremendous problems of life and death are daily put before you for solution. You can not avoid them if you would; they are forced upon you by your daily occupation.

As man to man, may I not ask you to give them that consideration which befits the highest problem that can be presented to any human being. That this life, with its hopes and its joys, its diseases and its disasters is all is denied alike by common sense, by reason, and by revelation. He is the best physician who takes account of the life hereafter as well as the life that now is, and who not only heals the body but helps the soul. Let your lives, therefore, be thoroughly religious, religious in your inmost soul, though often you may be denied its customary outward observances. Then shall character, which was my first postulate for our ideal physician, find expression in an ideal altruistic life.

*Professional Life.*—The ideal physician is a member of a learned guild. He should be above the tricks and petty jealousies of trade. True, he lives by his profession, but he who practices for gain is only a hireling and not a true shepherd of the sheep. If you would attain, therefore, to this professional ideal, you must be a constant student, keeping abreast of that scientific progress of which in your community you must be the exponent. You must not be satisfied with the knowledge which you now possess, but you must read, especially the medical journals, or you will be left behind in this day of rapid progress. You must know not only your own language, but must be familiar at least by a reading knowledge, with French and German, and if possible with other tongues. He who knows two languages is twice the man he was when he knew only one.

You must not only be skilful, but careful. I have made not a few mistakes in my own professional life, and in reviewing them I can see that for every one made by reason of lack of knowledge and skill, two at least have been committed by haste or want of care. With all our varied instruments of precision, useful as they are, nothing can replace the watchful eye, the alert ear, the tactful finger and the logical mind which correlates the facts obtained through all these avenues of information and so reaches an exact diagnosis, institutes a correct treatment and is rewarded by a happy result.

Be careful in your relations to your patients to deal with them conscientiously. In no other calling is the amount of service to be paid for committed absolutely to the judgment and conscience of the person who is to be paid for his services. Whether you shall make few or many visits is left to your discretion and honest judgment. Sordid motives may occasionally lead to the giving of unnecessary attention. But again it is a glory of our guild that very few physicians betray this trust, and those who do quickly lose their professional standing. Watch yourselves jealously in this and never let the greed of gain dull the fine edge of professional honesty.

You will be the father confessor to many a penitent. Family skeletons will be unveiled to you alone. The conscientious duty of professional secrecy is given, I am proud to say, into not unworthy hands. True, physicians are sometimes too lax in the repetition of petty gossip, but the profession as a whole is worthy of the confidences so freely given. Be careful, even to reticence, of any betrayal of this trust. Better suffer misconception and unmerited blame yourselves than betray your patients.

Be brave men. Your fathers were brave men. When pestilence stalks in the streets and contagion lurks in every chamber of illness, where have the doctors been found? Fleeing from danger with the frighted multitude? Nay, verily. If you wish to find them you must seek in the crowded tenements, in the hospitals and in the charnel houses. There you will find them cheerfully tending the sick, facing disease in the midst of its victims and seeking, even in the bodies of the dead, the knowledge that will make them masters of the plague. Witness Rush in the yellow fever of 1797, Gross in the cholera of 1832, Haffkine and Koch in the bubonic plague of the present time. War has given us many fine examples of personal bravery, but pestilence has bred its many quiet heroes who have gone about their daily duty, simply, fearlessly, devotedly. No granite shaft, no enduring brass may mark their last resting-place, but the Recording Angel has dropped a tear, blotting out their faults, and writ their names high in the roll of fame.

In your professional relations, never forget to be charitable. The best patients you will ever have will be the grateful poor, and your hearts will often find a sincere and grateful glance better payment than any gold. In your relations with other physicians, you will find many opportunities for that same brotherly kindness which is so beautiful a characteristic of our guild. Always extend to other physicians and their immediate families the courtesy of faithful attendance without pecuniary return. Avoid the petty jealousies, which, I am sorry to say, not seldom estrange physicians from each other. Always believe the best motive unless you know the worst is present. Never say an unkind word of a brother doctor when you can utter a kindly one. Try to be just even to those who are unjust to you.

*Public Life.*—In most communities, especially in minor towns and villages, the doctor is one of a small circle of educated men. His scientific studies make him familiar with many public problems, especially those concerning sanitation, the water-supply, the prevention of epidemics, the preservation of the public health, the problems of school life, the fostering of a proper athletic indulgence, the management of prisons, the care of the feeble-minded, the insane, the poor. On all of these questions you must make your voices heard in the communities in which you live or else you give them over to others less qualified and only mischief can follow.

No one, perhaps, is more of a leader than the physician in the various philanthropic enterprises of the day. These are closely allied in many respects to the topics just mentioned, and you will be on boards of directors and managers and trustees where you must bring your influence to bear for a wise outlay of charitable gifts and civic appropriations and for harmonizing the antagonistic elements which too often produce discord and confusion. If you combine the qualities which I have sketched for the ideal doctor, you will find that men will easily recognize you as wise leaders whom they will be glad to follow.

My best wish for you is that you may realize in your own lives these characteristics of the ideal physician. It will matter little then whether your life be long or short, for the proper measure of a life is not how long, but *how* it has been lived, and if you attain to old age, when the hairs whiten and the crow's feet begin to show, when your natural forces are abated, you will then not be alone in the world, but will have honor, love, obedience, troops of friends and one Friend above all others, the Great Physician. And when you pass from this life into the next, then shall you be greeted not only by this one great Friend, but by many from whose pathway you have plucked the thorns and briars of this earthly life; many whom through the devious paths of convalescence you have led back to perfect health, to home, husband, father, mother, children; and even if you have not been able to stay the hands of the grim reaper, those too will greet you whose last hours you have soothed amid the pangs of death and have helped through the new birth into the heavenly Jerusalem.

1729 Chestnut Street.

# Original Articles.

## SHOULD THE MEDICAL UNDERGRADUATE BE INSTRUCTED IN THE PRINCIPLES OF DENTISTRY?*

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It is, at the outset, necessary that the term "principles of dentistry," as used in this paper, should be specifically defined. Such a definition is required, both because there should be a definite understanding of the points that the discussion should embrace, and because, mindful of the fact that the path of the medical student already bristles with subjects, we should be loath to add an unnecessary amount of work to his daily routine. A requisite knowledge of the shape and uses of the various dental instruments can not be expected of the general practitioner; indeed, all the variations in dental technique as applied both to laboratory and operating-room are distinctively beyond the scope of dental principles, in their relation to general medical education.

The question at issue then narrows itself down to the advisability of the medical undergraduate being acquainted with principles of dentistry as they bear on general medicine. That the general practitioner should appreciate fully the process of dentition, in its relation both to local and constitutional results, can not be denied. Equally as important is it that he should be able to distinguish an incipient alveolar abscess from tic-douloureux, simple caries from caries complicated by exposure of the pulp, or the inflammation attending the eruption of a third molar from that caused by follicular tonsillitis. The medical undergraduate should be taught that no tooth need of necessity be lost through the ravages of caries; to judge of the efficacy of remedying these carious defects, he must of necessity be able to appreciate whether or not a tooth cavity has been properly filled. He should be taught to know that more teeth are lost through disease of the peridental membrane than through all other pathologic conditions of the mouth combined, and that prophylactic measures tending to preserve this membrane are of vital importance. He should be made cognizant of the intimate relationship existing between the general nutrition and proper mastication, so as to realize when artificial teeth are required, and if supplied, whether they are properly inserted. Such knowledge implies a proper understanding of the normal occlusion of the upper and lower teeth; it also leads to the appreciation of the value of orthodontia as a corrective for malocclusion.

A proper appreciation of the foregoing facts necessitates that medical undergraduates be taught dental embryology, anatomy, histology, and pathology, in order that these principles should form a foundation for a correct clinical observation of oral conditions. This will enable the general practitioner to serve best both his own interests and the interests of his patients, and at the same time tend to elevate the standing of the dental specialty.

No more opportune time than the present could have been selected for this discussion. For through the efforts of our medical schools, and of our state boards of medical examiners, the standard of medical education is advancing yearly. Moreover, this is an era of curriculum extension in all of our medical schools. With the advent of each scholastic term, there is either an extension in the number of subjects taught or a marked improvement in the methods of teaching them. Physiologic chemistry, bacteriology, orthopedics, and the other limited specialties are yearly receiving more attention and very rightly so. Yet, this era of educational progress is utterly ignoring the importance that the principles of dentistry should play in the education of all medical undergraduates. Dental instruction not only is not represented by any individual chair in any of our large eastern medical schools, but the teaching of dental principles is not embraced in any of the allied chairs of medical instruction. A medical education which neglects to train the undergraduate in the principles of stomatology is deplorably deficient. Thinking thus, we desire to show not the *modus operandi* by which the medical curriculum should be recast or altered, but rather the disadvantages resulting from the present deficiency in medical training and the advantages to be gained by supplying this deficiency.

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*Presented in a Symposium on Dental Education, before the Section on Stomatology, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

Such oversight in the method of medical instruction results in creating a disposition on the part of the general practitioner, not only to underestimate the importance of the principles of dentistry, but also to consider the dentist rather as an aid to comfort than as an active and important element in preserving the human economy. The evil results of the medical undergraduate's lack of knowledge of dental principles are all-pervading. On the staff of most of our hospitals it is rare to find the name of a dental specialist; yet, only obstinate bigotry may deny the frequent occasions arising in a hospital service that distinctively demand dental treatment.

The poor results that have attended the long-continued agitation for dental representation in the army serservice well illustrate the poor esteem in which dentists are held by their medical colleagues. All this too, despite the fact that the recent war demonstrated beyond a doubt that lack of official attention not only worked havoc among the soldiers, but also required the establishment of the sporadic and so-called "dental tents," where emergency dental work was performed by volunteers, taken mostly from the ranks.

Not less productive of evil results is the lack of dental representation in our naval service; for can a more disagreeable exigency be conceived than an intractable toothache occurring in a naval cadet on a cruise miles from home—a simple case for a qualified dentist to handle, and yet one which at present usually results in the extraction of the offending tooth, and the conversion of a possible future naval officer into an incipient cripple? And all this, because our medical confrères have failed to appreciate the importance of dental principles.

That ignorance of the principles of stomatology characterizes the general medical practitioner can not be denied; and as a result of this lack of knowledge his opportunities are greatly handicapped, owing to his inability to appreciate the diagnostic, therapeutic, and prognostic aids afforded by the clinical appearances found in the oral cavity.

As regards the diagnostic aid offered by the mouth, a thorough appreciation of normal appearances is both presupposed and necessary, in order to enable the practitioner to recognize the significance of incipient pathologic changes, symptomatic of systemic disease. A red, dry, glazed tongue, with characteristically swollen, hemorrhagic gingivæ, and rapid caries of the teeth are frequently the only signs of an incipient diabetes. Likewise, the characteristic whipcord-like tumefaction of the gum, over the palatal surface of the teeth, is one of the earliest signs of chronic Bright's disease. Similarly in gout, one of the earliest manifestations is the hard, smooth, blackish incrustations of salts found on the roots of the teeth. The peculiar linear discoloration of the gums, found as an accompaniment of metallic intoxication, renders the diagnosis of these sometimes obscure cases both easy and assured. In infantile scorbutus there is no sign of more diagnostic value than the spongy, bleeding, hypertrophied gums, accompanied by an extensive resolution of the infantile tooth structure. Finally, it may be said with confidence that study and observation of the oral cavity will yield many more invaluable diagnostic points to the seekers of them, and thereby serve to lighten the task of the well-grounded general practitioner.

As regards the aid in therapeusis afforded the general practitioner by the recognition of oral malconditions, it is only necessary to recall the pertinent relationship existing between the many neuroses and caries of the teeth. A few citations will best illustrate this fact: Remedying a carious and irritable tooth has often succeeded in abating the intractable vomiting of pregnancy; in the treatment of chorea, attention directed to carious teeth, considered as centers of reflex irritation, has often lessened the severity of the nervous affection. And finally, how well we know the numerous forms of neuralgia that baffle medical skill until the dentist discovers an exposed pulp and removes it.

As regards the influence of oral conditions on the prognosis of systemic disturbances, we have here a field whose full value is unknown not only to the general practitioner, but also to many dentists. The minute differences in local appearances can not fail to suggest to the careful observer a proportionate idea of the systemic disturbance, and thus these appearances lead to a much more exact prognosis. At a recent meeting of the Odontological Society of New York, I recited the history of a case of miliary pulmonary tuberculosis, in which, with no clinical knowledge of the case, I was yet able to give an absolutely fatal prognosis, based on conditions found in the mouth, and verified later, unfortunately, by the course of the disease.

Thus far we have attempted to outline those principles of dentistry, the knowledge of which would be of undoubted value to the general practitioner of medicine, and which, therefore, he should learn as a medical student. Not merely from the standpoint of the general practitioner of medicine, however, should this question interest us. As dentists, it behooves us not to lose sight of the fact that the education of medical undergraduates in dental principles would serve a double utility. There would result an incalculable gain to the medical man, it is true, but it is equally undeniable that the dental profession would also greatly profit by such an educational advancement. The newly-developed ability of the medical man to recognize early pathologic conditions of the teeth and mouth would result in more thoroughgoing prophylaxis, and in t[illegible] lie[illegible]lication of treatment. Even more t[illegible]perly [illegible] medical practitioner [illegible] of important diseases of the mouth, that would otherwise run their insidious course unnoticed and untreated. Granting that early recognition and the early application of treatment were in force, the task of the dental surgeon would thereby be rendered not only less arduous and more satisfactory to himself, but also far less unpleasant to his patients.

Nor is this the only benefit that the dentist would derive from such a change in the medical undergraduate's curriculum. I vouchsafe that there is known to all the members present to-day, that class of dentists, who, like the proverbially stubborn bird, can work well, but refuse to work well. Good dental work is distinctly time-consuming. There are any number of men eminently fitted to do excellent dental work, and who indeed do accomplish excellent results, until they have established a fairly large clientele. Then, suddenly discovering that their rewards are seemingly incommensurate with their labor, and realizing that the discrepancy is due to the time consumed in doing proper work, they sacrifice their ideals. Such a sacrifice is made, largely because the dentist realizes that he is the final judge of his own work. He is fully aware of the general practitioner's inability to pass judgment as to whether his patients are receiving intelligent or mediocre treatment. Armed with such knowledge, the unscrupulous dentist is able to continue the nefarious practice of working against time. The claim that the patient's appreciation of proper work serves as a check against such undesirable practices, is not tenable; for the average patient does not value a piece of work properly. Appreciation of dental work is in a large measure regulated by the confidence reposed in the dentist by the patient; and an incompetent politic man often succeeds better in inspiring his patients with confidence in him than does an honest, qualified practitioner.

I have compared the above class of unscrupulous dentists to the bird that can but will not sing. The analogy may be carried further. The little bird, you know, was made to sing, and likewise the capable dentist can be made to do proper work. Let him realize that Dr. A., who sends him many patients, has graduated from a medical school where dental principles receive merited recognition, and that he therefore values good dental work, and discovers faulty results; and the dentist will cease to work against time, and attempt rather to maintain the professional opinion and favor of Dr. A. In this way, then, also, the education of the medical undergraduate in dental principles will serve to bring about a much needed elevation in the standard of the dental specialty.

Still another way remains, by which an addition to the burden of the medical student's work would redound to the well-being of both dentist and general practitioner. I refer now to the cultivation of a stronger bond of sympathy between the two branches of practice. Educate the medical man properly, and he will learn to appreciate the dentist at his true worth. The value of the dentist's advice and opinion will be on a par with the advice offered by the ophthalmologist, otologist, or laryngologist. He will be consulted by the general surgeon, before a plastic or prosthetic operation is done on the jaws or mouth, and his ideas will be sought by the general practitioner attempting to treat some obscure lesion of the alimentary tract, which might have some connection with oral disease.

Valuable as such a change in medical education would be, and productive of unlimited good, it is nevertheless opposed on various grounds, and for numerous reasons. A discussion of the subject, therefore, would be lacking in completeness did it not consider these objections and show the tenuous foundations on which they rest.

First of all we meet the statement that the medical student, of all other professional students, labors most. His days are taken up with practical work, and his nights with study, and it would therefore be impossible for him to shoulder an additional burden of work. That the medical undergraduate's lot is an arduous one, none of us can gainsay, yet the scope of his work never has and never should be regulated, either by his capabilities for strenuous labor, or by the amount of time requisite for him to complete his course of study. It must not be imagined that the additional amount of study would be excessive; for it is not the mastery of dental technique that is asked of the medical undergraduate, but merely that he acquaint himself with those oral conditions having a bearing on systemic disease. The problem before him is solvable, even if it be difficult. His utility to the community depends on his ability to recognize and alleviate disease; and if a knowledge of dental principles will aid him, as it undoubtedly will, this knowledge must be acquired, at whatever cost of additional expenditure of time and labor involved.

This objection disposed of, what can be said to the often repeated statement that the testimony afforded by the mouth is at best of only slight corroborative aid to diagnosis? Such a statement is truly absurd. The philosopher's stone was never more assiduously sought than are aids to medical diagnosis. If conditions of the mouth will serve to guide a practitioner properly even in a small number of cases, the knowledge of these should be as assiduously cultivated as are the physical signs of the chest and abdomen. In a very recent brochure on pyorrhea alveolaris, Fitzgerald, of London, calls attention to the frequency with which diseases of the gum cause antral empyema, chronic gastritis, phlegmonous gastritis, systemic toxemia, and other infectious diseases, whose early recognition and scientific treatment can not be divorced from the absolute necessity of recognizing and appreciating the primary focus of disease about the gums. There are those who are in honest accord with us in all that has so far been said, but who believe that since there is no lack of good dental practitioners, the medical man can always refer his cases to his dental confrères, and thus conscientiously avoid the disagreeable duty of himself mastering the principles of dentistry. Such a statement, however, is one of the strongest arguments in favor of our proposition. In the first place, the medical practitioner of to-day is incapable of judging whether or not a particular man is an efficient dentist, and again he is oftentimes equally incapable of discovering early pathologic conditions due to oral disease, and requiring simple dental treatment, in order to effect a cure. We do not deny the existence of innumerable dentists capable of aiding the general practitioner; but we do affirm the general practitioner's lack of proper appreciation of the scope of these dentists and their work in remedying systemic disease.

In conclusion, let it be noted that the mouth and teeth are as much an integral part of the human economy as are the eyes, ears, larynx, or genito-urinary apparatus. The interdependence of systemic diseases and of diseases of the oral cavity is as close as that between the body and any other of its functionating organs; and therefore the general practitioner is in duty bound to acquaint himself with the appearances of the normal and abnormal oral cavity. The seemingly complete separation of stomatology from general practice, in existence in this country to-day is a result of the failure of medical men of sixty years ago to appreciate the importance of dental principles. What we are striving for to-day is the closure of this gap, and the only feasible way to accomplish it is to acquaint the medical undergraduate with the important bearing that a study of the mouth has on the application of the general principles of medicine. Our thesis is to emphasize the fact that in knowledge lies power, and that the resulting power is always commensurate with the comprehensiveness of the knowledge. That this knowledge need not be all-embracing, we have tried to point out by distinctly limiting the term dental principles; but that it would be of unqualified value, we have also tried to show by pointing out the advantages to be gained from acquiring such knowledge: There would result the necessary feeling of sympathy between the dentist and general practitioner; the general practitioner's work would be of a higher standard, the dentist's work would be more satisfactory, and, lastly and most important, the patient would be better served. These results are truly to be hoped for. Although it is true that the medical profession contains men, who by a self-imposed duty of study and observation, after graduation, have rendered themselves capable of recognizing and properly appreciating diseased conditions in the mouth, yet such men form a glittering minority. We firmly believe that the only way of increasing the number of this conscientious minority is by instructing the medical undergraduate in those principles of stomatology which will make of him a truly broad general practitioner.

38 East Sixty-first Street.

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## THE HANDWRITING ON THE WALL: WHAT DOES IT PORTRAY?

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The founders of American dentistry had high professional ideals. The methods of practice at their command were the most crude and almost if not wholly mechanical. They deemed the specialty a part of the healing art and hence a department of the science of medicine. Such profound regard had early practitioners of dentistry for their calling that in almost every instance before or after they had begun practice they took up the study of general medicine. They were capable of practicing and did practice general medicine. The illustrious Haydon, Jeffries and many others were graduates of the best American and foreign medical colleges. Later, from 1810 to 1840—the latter date being that of the establishment of the Baltimore College of Dental Surgery—a long list of medically educated men gave honor and dignity to their special calling. These men were the peers of any in the practice of medicine. I doubt if there has ever been a period in our history when such a large percentage of cultured gentlemen graced the dental specialty. They were men of dignity and standing, men of influence, holding the respect of the people in the community in which they lived.

The foundation of a dental college in 1840 and the creation of a degree divorcing dentistry from medicine, marks the period of the narrowing of our calling. No matter what the views of others may be, the motto of our country—"together we stand, divided we fall"—is as applicable to dentistry as to national affairs. The dental student and too often his teacher have forsaken the broad principles of medicine and have dwarfed the teaching of physiology, pathology, and treatment of the human tooth into mere side issues in comparison with the instruction in extraction, in insertion of dentures, and in crown and bridge work. A single attendance on a dental society and slight perusal of dental journals suffice to show the exceedingly narrow lines into which the profession has drifted. Scarcely a dental journal is issued in which the handwriting is not noticed upon the wall. Indeed, outside of filling cavities and roots of teeth and other mechanical operations the profession is almost at sea. Multitudes of instances might be quoted from current dental literature, but the few following will suffice.

A paper was read recently before the New York Institute of Stomatology, on "Pyorrhea Alveolaris from a Bacteriological Standpoint, with a Report of Some Investigations and Remarks on the Treatment." Experiments familiar to mere tyros in bacteriology were cited, and the following concerning rabbits that were infected: "All were made sick, some were sicker than others, an abscess formed in one." The bacteriologic ignorance in the omission of Koch's law should have prevented its serious consideration by a medical society.

A professor in a western school, commenting on a recent article—"Interstitial Gingivitis due to Autointoxication"[1]—remarks: "I can not agree with the author as to the folly of local treatment, the cases have grown to large proportions in my hands, where local treatment has effected a cure, in fact, I feel so sure of this, that I can not reconcile my experience with his positive conclusions." Can it be seriously assumed that dentistry is so far ahead of the mother profession as to cure constitutional diseases by local treatment?

In August, 1894, in a paper read at the meeting of the American Dental Association, held at Old Point Comfort, Va., the following method of classification of the different forms of so-called pyorrhea alveolaris was given: "This classification is made by simply prefixing to pyorrhea, an adjective stating the name of the disease which is causing the pathological symptoms in the oral cavity, as 'gouty pyorrhea,' 'diabetic pyorrhea,' etc. It is unnecessary to enumerate the subdivisions that might be listed, as they embrace all causes that may disarrange nutrition." With all the admittedly valuable data of the paper, its author ignored the simple fact that bacterial infection implied a suitable culture-medium only. So far as the established infection present in pyorrhea was concerned, that culture-medium might or might not be resultant on any autointoxication due to these diseases. For purposes of clinical study and treatment the pre-pyorrheic stages were all-important. The complexity of the proposed classification would destroy its value for clinical purposes.

In a certain city, dentists were urged to form a society to furnish money to enable a brother dentist to make scientific researches in bacteriology in relation to so-

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*Presented in a Symposium on Dental Education, before the Section on Stomatology, at the Fifty-first Annual Meeting of the AMERICAN MEDICAL ASSOCIATION, held at Atlantic City, N. J., June 5-8, 1900.

[1] Internat. Dent. 1900.

called pyorrhea alveolaris. This dentist was an amateur in microscopy, who knew almost nothing as to what had already been done in dental bacteriology—the same was true of those who were to furnish the funds—and nearly as little as to bacteriologic laws. He was a man of fair education, but it would have required years to have fitted him to undertake expert work. Would a business man who required an accurate analysis of a certain spring water or compound of drugs or adulterated food employ an individual who had yet to be trained as an analyst? Fortunately for those who were to furnish the money and who expected results, the plan was dropped. This scheme illustrates excellently the unscientific conception of dentistry held by many well-meaning men in the profession.

Under the heading, "Etiology of Pyorrhea Alveolaris,"[2] an attempt is made to determine the etiology of a disease by the examination of deposits about the roots of the teeth, made in three cases by a chemical expert and "six or eight by Professor ——— in my presence, the results obtained corresponding to those of Professor ———." How much weight would such experiments have in a scientific body?

Some years ago the Faculties Association formed a species of trust and appointed professors to write text-books to be used in the colleges. These honors were parcelled at random on stock-holding principles, regardless of ability or qualification. As might have been expected, the books published, except in one or two instances, are a disgrace alike to author and the professor. Almost all are uncritical compends of a limited field of dental literature. A notable disgrace in this particular is a puerile work on "Orthodontia." Here is a work without a single original idea, a hazy compilation of other men's thoughts reduced to the level of the teacher's capacity and the requirements of the students. The author's mind proved unequal to the task of comprehending works already extant and held in high esteem for their scientific basis. Yet this man was supposed to teach science.

A professor on theory and practice in a dental school, recently speaking of so-called pyorrhea alveolaris, said: "I would advise you to read the views of both Drs. Rhein and Talbot and choose for yourself which theory is correct." This reminds one of the difficulty Lord Timothy Dexter had on punctuation. Lord Timothy gained a fortune by sending warming pans to Africa. He wrote a book, but gave up the problem of punctuation in despair, placing at its end all works of punctuation so that the reader might "pepper and salt to suit himself." The task of scientific analysis was similarly too much for our professor.

In a discussion of prothesis and orthodontia, before the Columbian Dental Congress, another professor remarked: "I am particularly interested in the correction of irregularities of the teeth and I find that the etiology has very little to do with the correction. I find I can correct almost any case of irregularity regardless of the cause." Can it be that dental science has reached such a stage of perfection that disease can be eradicated without the knowledge of cause? This seems strange when it is remembered that the entire trend of medical thought and energy is directed toward the etiology of disease.

In the discussion of a paper on "Degeneracy in its Relation to Deformities of the Jaws and Irregularities of the Teeth," read before the Odontographic Society, another professor said: "The subject is an interesting one, but it is rather one of to-morrow than of to-day. Our knowledge of these facts is not sufficiently advanced to form positive data on which to base certain opinions and I am sure that the subject will not under such circumstances appeal to the members present as something perhaps of another thing would."

The first paper on the subject of irregularities of the teeth was published in 1794. Is it possible that the profession has made no progress in the study of the etiology of such irregularities during the past century? From such remarks by a teacher in two dental colleges, and from the further fact that there was no further discussion of the subject, the inference seems plain that the profession knows nothing about one of the most important questions in its specialty.

Discussing Dr. Frederick Peterson's paper, read before the New York Odontological Society, on "Deformities of the Hard Palates in Degenerates," one dentist remarked: "I feel just a little foolish to-night, because I have brought with me a case full of models that seem to me to be rather out of place. I labored under a misconception of the subject. I understood that it was to be a discussion on cleft palate in its relation to degeneracy, and when I was asked by the chairman of the executive committee to bring some models with me, I agreed to do so. . . . There is one point that I would now make in connection with the models, and that is, whilst they are exceedingly abnormal mouths they are casts from normal people. The patients are not degenerates in any sense of the word, so far as I know."[3] This is, as the newspapers say, very important if true, since congenital cleft palates are generally regarded as most marked expressions of degeneracy.

The following reply was sent to Dr. Vernon Hall in response to a letter as to the use of his "Chemistry and Metallurgy applied to Dentistry":

> *Dear Sir*:—Pardon us for not replying to your favor of recent date, but we have been so exceedingly busy with the college rush. We regret now to say that your work on Metallurgy did not meet with very much approval, for the reason that the professors here seem to be "stuck" on Hogden, of San Francisco, Cal., and claim that there is more chemistry than is practical for students' use in your work; and we were very much disappointed at the reception your work received.

A bill is now before Congress for the appointment of dentists in the army and navy. A mail report from General Otis contains an alarming statement regarding the condition of the teeth and jaws of the troops in the Philippines. The case of Walter Fitzgerald, Company C, 28th Infantry, formerly of the Montana Volunteers, is cited: "This young man, 23 years old, has been in the Philippines for a year and seven months. He was one of the first volunteers to reach Manila after Dewey's victory. Nineteen months in the tropics, subsisting on the rations of the army, have resulted in the loss of nearly every tooth in his mouth. It is not the climate alone which is responsible. It is that which undermines the roots of the teeth, while the tropical fever, which has afflicted nearly every volunteer now in the islands, affects the gums of the mouth and loosens the teeth. Grinding on army biscuits and canned beef doesn't naturally improve the teeth. In the case of Fitzgerald, the teeth did not decay, but they dropped out one by one. This is a common ailment in the Philippines and the cause generally is the fever. The hospital surgeons are able to relieve the condition of the patient to some extent, but constant care after the fever is necessary to save the teeth. If this bill should pass and become a law, how many dentists are there who are capable of coping with such conditions as mentioned above? To be sure the dentist might look wise and plug the cavities in these teeth.

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[2] Ibid., January, 1894.

[3] Ibid., December, 1895, page 755.

An editorial review of a work on "Interstitial Gingivitis" claims: "To say that gingivitis in the dog and sheep resembles or is analogous to the lesions found in man, calls for a very broad imagination. . . . The environments of man are so totally different from those of street or pound dogs or domesticated sheep or guinea-pigs that we must consider this otherwise excellent work as failing to throw much light on the etiology or pathology of interstitial gingivitis."[4] This review speaks for itself. In the light of the great advance in medicine through biologic experiments during the past two decades such an editorial seems an emanation from a Rip Van Winkle who had remained asleep from the days of fetichism suddenly to awaken in the closing years of the nineteenth century and to insist that not he but the world had been asleep.

Many more illustrations could be added, as the dental journals of the past year are replete with examples of such ignorance; still, a sufficient number have been cited to demonstrate the need of a broader education. Until this is acquired no advancement can be made along the lines of original research and no progress is possible. The handwriting upon the wall marks the standard of the profession.

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# LIMITATIONS IN DENTAL EDUCATION.*

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In dealing with limitations in dental education, we are brought face to face with their greatest evil—divorcement of dental from medical teaching. Removal of a special department from general medicine and tuition along narrow lines have so narrowed teaching that even diseases of the general system which affect the mouth, jaws and teeth are excluded. The medical profession has been content to let the dentist entirely alone. In studying systemic diseases, therefore, it has not trespassed on the field of dentistry. The result is that study of the general diseases which affect the mouth, jaws and teeth have been neglected. Limitations of a dental education have prevented the dentist from associating local diseases with systemic causes.

The very title, "Doctor of Dental Surgery," has so closely and exclusively limited the profession, as it is called, that the dentist is known by the laity as doctor of the teeth. A letter received by me March 24, asking me to deliver an address before a state society in a city of 50,000, says: "The people here don't seem to realize that a dentist is anything more than a man with a pair of forceps who can yank out a tooth for a quarter."

The mental atmosphere of the colleges is such that the student very soon imbibes the fixed idea that repair of decayed or dead teeth and restoration of lost ones is all that is expected of him when he leaves college. Anatomy, physiology, chemistry and pathology are so taught as to impress the student with the notion that these subjects have little to do with dentistry, and hence a feeling results that to obtain the degree of D.D.S., the student need have but the dimmest idea of these sciences. The result is that the graduate of dental surgery is not competent to associate systemic diseases with their effects on the teeth, nor is he capable of appreciating systemic lesions due to overtreatment of pathologic conditions of the teeth.

The jaws and teeth, as part of the human body, are influenced by the local and systemic conditions of the human organism. Narrowing our specialty to the treatment of the human tooth and ignoring the influences of the systemic diseases of the body and the local diseases which surround the jaws and teeth has resulted in great mental limitations to the dentist. Only a medical education can remove these mental limitations. Dentists have virtually come to a standstill as far as restoration to health is concerned; nay more, owing to ignorance, not being satisfied with assisting Nature to restore diseased teeth to health, they are in many ways encouraging disease and destruction of the very tissues which they, as specialists, are supposed to protect.

Embryonic evolution teaches that the jaws and teeth are transitory structures, degenerating from year to year. They were foreordained to destruction from the very beginning. The teeth, unlike other structures of the body, obtain their size and growth before they erupt. Therefore nourishment and repair are out of the question. If decay of the teeth—which is a natural process—will not remove them, a simple process, interstitial gingivitis, and finally a still simpler process, osteomalacia or senile absorption, will accomplish the result. In the lower vertebrates, such as the whale, shark, snakes, etc., continuous succession of teeth is produced throughout life. Osteomalacia or senile absorption, therefore, is the outcome of the law of atavism. Nature is trying to remove the second set. The changes in the shapes of the alveolar processes tend to lessen the blood-supply of the teeth. A society fad—etiquette in mastication—whereby the lips are closed and the motion of the jaws is barely perceptible in chewing is not conducive to strength and vitality, but atrophy or arrest of development is sure to follow. Is there not a limit to certain operations that are so enthusiastically advocated by dentists? In early races, as indicated by their skulls, and in modern nearly pure races, decay of the teeth, when observed, always commences in the fissures of the crown and at the necks of the teeth below the enamel. These are the defective places in otherwise strong, healthy teeth. In the teeth of to-day, owing to degeneration in shape, size and structure, and owing to modern methods of life, decay takes place at any locality, owing to imperfectly developed tooth structure. Decay is more frequent and more rapid to-day than formerly, and is increasing with great rapidity. It is more rapid in some nationalities than in others.

One is also impressed by the rapidity of decay of the teeth when comparing those in ancient and modern skulls, of nearly pure races, with the teeth of the present generation. With the concentration of all the knowledge, energy and skill that has accumulated in the dental profession, the result of its narrow teaching in the past sixty years, dentists have not been able to prevent the ravages of decay. Nor they will be if they practice present methods for a millenium.

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*Presented in a Symposium on Dental Education, before the Section on Stomatology, at the Fifty-first Annual Meeting of the AMERICAN MEDICAL ASSOCIATION, held at Atlantic City, N. J., June 5-8, 1900.

Fillings are inserted no better by dentists to-day than they were forty or fifty years ago. All that any one can or ever will be able to do is to insert a moisture-tight filling, excepting, of course, amalgam. A patient comes; cavities in the teeth are filled; the patient is dismissed with a request to return in six months or a year; he returns, as requested, with more cavities and decay around those recently filled, but the dentist is not disappointed.

With the existing limited knowledge, the central idea seems to be to stop the cavity in the tooth so that it will not decay again. This being the case the entire energy and brain of the profession—so-called—is exerted in finding some means to carry out this idea. The filling must be made more than moisture-tight. To do this it must be malleted in with as much force as patient and tooth can stand, regardless of pericementitis, interstitial gingivitis, necrosis of the jaw, and sensitiveness and death of the pulp from thermal changes. It is perfectly absurd to submit the patient to such agony. The cavity must be measured. If it be the size of a pin-head, the entire approximal surface of solid tooth-substance must be cut away, thus subjecting the patient to hours of torture—to say nothing of the expense and of the furnishing of a larger surface for the destruction of the pulp by thermal agencies. By filling the teeth the cause is not removed. Under present methods dental technique will never prevent decay.

Apropos to what has already been said may be quoted a paper read before the British Medical Society, at the meeting in Portsmouth, Aug. 1-4, 1899, by Dr. James Cantlie,[1] on "Early Decay of the Teeth in Britain." He says: "That the teeth of our children are in a bad way is an acknowledged fact, proved over and over again. . . . The result of all such inquiry has been the publication of statistics proving an abnormal amount of disease. The natural importance of this can hardly be overestimatd. We can not expect to rear a healthy race on carious teeth. . . ."

"The cause of this premature and abnormal decay is, however, scarcely dealt with. . . . The dental art has attained so high a position in this country and in America, so far as the mechanics of the art goes, that there is but little more to be done. . . . But I would like to induce our dental brothers to look a little farther afield and to tell us how to raise the child, so that the teeth while yet unerupted and within the dental sacs may be allowed to grow to the greatest perfection."

"The National School of Dental Techniques" is the last straw on the camel's breaking back. It is the essence of narrowness. It will soon wear out its usefulness and become a thing of the past. What is needed to-day is a broad education in pathology that will find the cause and remove it. Dr. Arch. C. Hart, of San Francisco, as represented in his paper on "Evolution of the Decay," has worked along the right lines. He deserves credit for courage in presenting the subject in a new aspect.

Modern methods of practice, such as gold crowns, bridge-work—producing irritation of the gums—cutting away the teeth—allowing the roots to come close together (Bonwill), thus removing support and nourishment from the teeth—are fruitful sources of interstitial gingivitis.

The application of bridge-work when one or two roots are required to support two or more crowns is certainly pernicious practice. Especially is this true in those cases in which the alveolar process has once become attacked with syphilis or scurvy or poisons, such as mercury, lead, etc., and in those cases in which autointoxication produces interstitial gingivitis. The alveolar processes which have become involved are more susceptible to irritation and finally to loss of structure. From what has been learned in the past four years of the alveolar process and its absorption, implantation and transplantation of the teeth after the jaws have obtained their growth can never be considered a successful operation.

Correcting irregularities of the teeth by the use of springs, ligatures and elastics, after the alveolar process has obtained its growth, requires great skill and judgment to prevent destruction of the alveolar process. Many mouths have been injured by the too rapid movement of the teeth by these instruments. The pernicious habit of "beautifying" the teeth by the use of silk threads, so strongly recommended, has been an object-lesson to many practitioners in the neighborhoods where such operations have been performed. There are many other mechanical operations in which the enthusiast over-reaches the mark, the discussion of which is not apropos at this time. Since dental technique has reached such a high state of perfection in our dental schools, it is high time that the faculties should turn their attention to the scientific side of dental teaching. No wonder that our British and European confrères have such a poor opinion of our dental schools.

Viewing the subject from a university standpoint, dental college teaching is in a rut, and a deep and narrow one at that. A large percentage of the colleges ought not to exist. While the motive of many of the teachers is honorable, a large proportion of them have not the proper education to teach. Presidents and boards of regents of the universities having dental departments should reorganize these schools and place dental teaching on as broad a foundation as other departments of science. The preliminary qualifications, entrance examinations and length of course of study should be the same as in other departments. Then and not until then will dentistry hold the position in the community which it deserves.

# IS A MEDICAL EDUCATION A NECESSARY QUALIFICATION FOR DENTAL PRACTICE.*

BY ALICE M. STEEVES, D.D.S.

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In this age of strenuous activity and rapid advancement, when personal gain often seems to be the sole object of professional work, the necessity for a medical education in dental practice may be denied by the narrow-minded in either profession.

The development of specialties in recent years has created a spirit of commercialism in which completeness of education is neglected, and only those studies acquired that can be quickly turned to money. In no specialty has this tendency been more marked than in dentistry.

If concentration of energy and study makes the successful specialist on all medical lines, may not the dentist claim an added opportunity for even greater ability because of the mechanical skill required in his work.

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[1] Brit. Med. Jour., September 2, 1899.

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The way upward in dentistry, not unlike all other professional paths of to-day, through cheap competition and unethical practice, is hard enough at best and requires the use of every possible resource.

Dental science originated in the medical profession and, although not permitted to become a part of the mother profession in the begininng, it is recognized today as a specialty of medicine, and justly so, for there is no more reason for making a distinct profession of dentistry than of surgery, neurology or ophthalmology.

On the one hand, it is claimed that dental success consists merely in the production of a skillful result from a mechanical standpoint, while on the other we hold that a dental education has the broadest possible significance and includes a knowledge of the structure and function of organs, not only of the mouth but of the whole organism, and of the principles of disease as well.

The dentist should receive the same preliminary education as the medical specialist, because in so far as dentistry is more than a mechanical art, it depends on the same sources and requires the same studies as all other departments of medicine and surgery. The principles of disease are the same, whether they occur in the internal organs, the extremities or the teeth. A knowledge of these elementary principles in one set of organs requires the same studies as that of any other group of organs in the body. The necessity for more complete pathologic training becomes apparent whenever the dentist attempts to treat diseased conditions of the mouth.

It is not enough to remove or advise the removal of the cause of the disease, unless we can make a logical diagnosis as to the cause and be able to predict the probable outcome of its operation. The surgical principles do not differ from those in other surgical practice. The laws of aseptic and antiseptic treatment are just as applicable to dentistry as to amputations, because the inflammation which produces an alveolar abscess is the same process as that which follows any septic infection.

The dependence of one set of conditions on other conditions at distant parts of the body must be recognized. One of the simplest, yet greatest, examples is the perfect assimilation of food, possible only through normal conditions in the mouth.

There is a common interest between the dentist and other medical specialists. The dentist must be familiar with the structure and function of organs other than those of the mouth, while the medical man should be able to recognize the presence of diseased conditions in the mouth and their relation to morbid changes elsewhere.

Medical and dental students should be educated in the same schools, because the fundamental studies which each must pursue are the same, and should be required to take different clinical and laboratory instruction in their separate specialties, only in the advanced courses.

By this combination we would secure the advantages of larger institutions, more fully equipped laboratories, better clinical facilities, and instructions by the best specialists in each department, while the broader scientific atmosphere would create a healthful competition between the students of both branches. If the position of the dental specialist shall equal in dignity and importance the foremost in medicine, it will be necessary to educate and train the dentist more thoroughly in the fundamental principles of medical and surgical science.

The advantages of united work in this ASSOCIATION are many, and he who will grow must avail himself of these meetings. The obstetrician's paper will help us to care for the mother during the period of gestation, that of the neurologist will aid in the management of neurasthenic and nervous patients, which is so often a difficult problem, while the surgeon's paper will assist us because we are surgeons.

I have given but few of the many reasons why the physician and the dentist belong to the same great profession, must work with the same methods, study the same principles; and the dental student may well spend one-half or three-fifths of his time in securing a thorough ground-work in the laws of the medical profession.

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# SOME THOUGHTS ON TEACHING MATERIA MEDICA AND THERAPEUTICS, EMPHASIZING OBJECT TEACHING.*

BY A. H. PECK, M.D., D.D.S.
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This subject is, I presume, rated by the majority of teachers in dentistry, and certainly by the vast majority of students of dentistry, as the dryest and most uninteresting of the entire college curriculum. Why this is so, I can not tell. I can only leave those who are especially interested in this particular work to draw the inference. As for me, I would not exchange my position as teacher of materia medica and therapeutics for that of any other in the list of instructors. This work is anything but dry and uninteresting, as I find it. I see in this field such opportunities for original research, for broadening of one's mind, for extension of one's knowledge, for general rounding of one's mental capabilities and character—teacher or student—as are found in very few, if any, of the other departments of college work. Surely, the individual who is unable, in the light of such possibilities, to present his work to the students in such a way as to command at the very outset, and to hold throughout, their respect and interest, is certainly not the kind of individual referred to by the gentleman who said, "Poets are born, not made;" for this saying applies just as truthfully to the teacher as it does to the poet.

One of the first and most important questions to be considered in a paper of this character is: Just how far should we, as teachers of dental students, carry our pupils in this great field? Are we justified in being content to teach them just enough to enable them to treat locally, reasonably well and with a respectable degree of success, the various pathologic conditions about the mouth? Or, should it be our aim to so instruct them that they will at once be able to recognize and intelligently prescribe for the various systemic disorders that are constantly aggravating the local pathologic manifestations, many of which are only indexes of the systemic disorders. My answer is most emphatically in favor of the latter course. Please do not understand from this declaration that I would have the dental student subjected to as thorough and complete a course in materia medica as is required of the medical student. However, I am strongly inclined to the belief that this phase of the question should be qualified only by the unfortunate condition invariably imposed upon us, namely, lack of time. Surely, no one will deny that three years, of six, seven or even eight months each, is insufficient time for the students to become thoroughly learned in all the branches now included in our curriculum; consequently the work in some of the departments must be cut down as much as possible, and perhaps, chief among these is materia medica and therapeutics.

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Nothing grieves me more than to hear, as we frequently do, from the older members of the profession, the leaders, those to whom we are accustomed to look for guidance and inspiration, this sentiment, that it is a mere waste of time to teach the dental students more materia medica than is necessary to enable him to treat, reasonably well, the local manifestations of trouble about the mouth.

What would you think of a man enjoying a lucrative practice in a large city like Chicago, or elsewhere for that matter, merely treating with local remedies the local manifestations in the mouth in a case of syphilis, and never even thinking that this disease calls for systemic treatment, to say nothing about possessing the knowledge to prescribe for it. Such a case, under these conditions, was referred to me only a short time ago.

The very logic of medicine lies in one's ability to recognize the primary action of drugs on the various organs, and, through the great systems of the body, the secondary action on other organs, in this manner having an indirect but important bearing on the local pathologic manifestations. Thus one is enabled to note the parallelisms existing between the action of drugs and the pathologic conditions in disease—a very fascinating study indeed.

Let it be understood, then, that we favor the following as the order of their importance: 1. The therapeutics of these drugs with which the student will come in contact daily in his practice, such as the antiseptics, disinfectants, germicides, escharotics, counterirritants, and styptics. 2. A thorough knowledge of at least the standard remedies that may be indicated for the alleviation of all the systemic disorders that may in any way aggravate or affect the local diseases under treatment. 3. A thorough knowledge of the circulatory stimulants and depressants; the respiratory stimulants and depressants; the nerve stimulants and depressants; the hemostatics, diluents and antiphlogistics. 4. A knowledge of the most important of those agents which in any way assist the digestive, assimilative and eliminative organs—the last comprising the sudorifics, diuretics, and cathartics. Local and systemic antidotal treatment is of the utmost importance. The intelligent prescribing of these medicines must never be neglected.

Two important questions now present themselves: How much regarding these various agents shall we teach, and how best may we teach it? In answer to the first question, I would say that we can not teach too much about them. Our students should be well grounded in the pharmacology, source, constituents, physical characteristics and properties and physiologic action—in its broadest application—their dosage and indications and most of all, their therapeutic value, of the various agents. An individual consideration of these agents or groups of agents, however desirable, is out of the question in the time allotted to this paper.

In answer to the second question, How best may we teach this? I will reply that no one rule or set of rules can be followed successfully by all. As indicated above, teachers, as well as poets, are born, not made, and each one will find it necessary to follow the guidance of his own personal capabilities and characteristics. In my individual work I find the recitation plan of inestimable value, the source of the drugs, their physical characteristics and properties, their chemistry and dosage being taught almost exclusively after this plan. The physiologic and therapeutic action of the agents is taught by lectures and by demonstration. However, oftimes I find the recitation method peculiarly adapted to this division of the work. We should strive to make our teaching in these two phases of our work just as interesting to our students and as thorough as possible. It is of the utmost importance that we be able to select the proper drug for a certain form of disease. Blundering in this respect is inexcusable, and often results in the most serious consequences. To understand clearly just how far these agents are affecting the various organs through which they are passing on their disease-healing mission, is most important and neccessary to an intelligent use of them.

Soon after assuming the duties of this chair in college work, I became especially impressed with the many shortcomings of our various text-books. Indeed, any one who has taken the trouble to look into this question will agree with me, that one has only to consult another author than the one that does not suit him, to find teaching to suit his own particular fancy; so at variance are the statements of the many different authors pertaining to these various questions in materia medica and therapeutics.

Their lack of harmony as to the relative potency of the various antiseptics and germicides and their almost total lack of consideration as to what special agent, under certain conditions of irritation, inflammation, sepsis, or otherwise, would be most desirable especially impressed me. I consider it of the utmost importance that our students, and we practitioners, shall be possessed of knowledge that is accurate, regarding especially the essential oils and other agents we are daily using. We should know their relative value or potency as antiseptics, disinfectants and germicides. When we select an agent to place, perchance, in the root-canal of a tooth, it is important that we be familiar with its relative ability to perform that work. Not only this, but I also consider it equally important that we should know the action of these drugs on the soft tissue with which they come in contact. The antiseptics and germicides are poisonous to the vegetable cell. They are used in our work to inhibit the development and to destroy the germs of disease. Many of them are, as well, poisonous to the animal cell. No one will question the great value of being able to select an agent for a certain case that will destroy the germs present—render the parts antiseptic—and, at the same time, will remain harmless in contact with the soft tissue. Frequently it is desirable that an antiseptic or a germicide be used that is also stimulating to the diseased tissues, causing them to yield more readily to the healing influence of the drug. Again, it may be desirable to use one of these agents that imparts a depressing effect upon the soft parts. How are we to make these selections with judgment and certainty without an accurate knowledge of their action when confined in contact with soft tissue?

That I could have something definite to work upon; that I could feel when I went before my class and made certain statements in this connection that I would verify those statements by actual demonstration, I have adopted the following plan of teaching these phases of the subject: During each term a thorough and complete series of tests is made in the bacteriologic laboratory and before the class, to determine the exact relative value of these agents as antiseptics and germicides. Also an exhaustive series of experiments has been conducted on soft tissue, animal and human, in both a pathologic and normal state, to determine which are irritating, stimulating or depressing, that we may make our selections for special use with wisdom and certainty.

I believe the same individual who teaches therapeutics should teach special pathology. The two fields are so closely co-related it is impossible for a teacher to give a comprehensive course of instruction in the one without trespassing more or less on the other. Since special pathology has been assigned me in connection with therapeutics I find I am able to present the work in a much more interesting manner than I otherwise could do. The students unquestionably gain a clearer and more satisfactory understanding of the various diseased conditions, their pathology and therapeutics, than was formerly possible.

Throughout this brief paper I have hinted at the value of *object teaching*; I wish now to emphasize this method as strongly as may be. No one can deny that more thorough and satisfactory work can be done by object teaching and actual demonstration, where the nature of the work admits it, than is possible through the medium of lectures. Suppose it is our purpose to teach the class the effect of a certain drug on the various organisms, and for the purposes of illustration we select a cardiac and respiratory stimulant. We go before the class and in language that is simple, plain and can not be misunderstood tell the manner in which the drug affects the circulatory system and the organs of respiration; that it acts directly on the nerve-centers in the medulla and, through the medium of the vasomotor system of nerves, stimulates the muscles of the heart to greater activity, thus increasing the force and frequency of the pulse; and that it acts, through the medium of the circulation of the blood, on the respiratory organs, stimulating them to greater activity, thus deepening and lengthening the inhalations. Again, a suitable animal is provided, placed upon the table in an appropriate manner, is anesthetized that it shall not suffer pain, then with the knife and proper apparatus these internal organs under consideration are exposed to view; the students see them in operation performing their natural functions. Now the stimulating agents are administered and the students see their effect upon these organs. In turn they are taken to the laboratory and required to make the demonstration themselves. Do I hear any one ask which method of teaching will make the profounder impression on the students' minds? Personally, I can see no comparison. The simple pleasing word-picture as presented by the "successful" lecturer makes but a passing impression on the mind of the average student. This can not be called knowledge, only transient information. The actual demonstration which he has made and observed makes a deep and lasting impression on his mind and imparts to him knowledge that is permanent.

We do not think of instructing students in anatomy by only lecturing to them on the subject. The institution of learning that to-day would advocate this would be laughed to scorn. No, we take the students to the dissecting-room and there teach the subject by actual demonstration. What would the teaching of chemistry amount to without the laboratory? And the same question may be asked in regard to the teaching of metallurgy. It is unnecessary for me to follow this line of illustration farther.

It seems to me that object teaching in all branches and departments of our college curriculum which admit of it is the only true effective method to be employed. We must work in this manner of teaching more and more if we desire to make the best return for the favor and patronage of our students. I confidently hope and expect in the near future to see a general move along this line in college work.

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## PATHOLOGY OF ACQUIRED HEART DISEASE IN CHILDREN.[*]

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When asked to write upon this subject for the Symposium of the Pediatric Society I realized how hard it is to make such a paper more than a mere catalogue of lesions. To avoid this it has seemed better and more profitable to consider the subject in a comparative light, and to take the pathologic changes in the adult as a standard by which to develop the difference in the pathology of the child heart, together with some inquiry as to the causes of these disturbances. With such an object in view it seems best to take up first the conditions of nutrition and disease particularly liable to affect the heart in childhood.

### NUTRITION OF THE HEART IN CHILDHOOD.

It is a general law that the tissues respond more quickly and more readily to stimulation and grow more vigorously in early life than after puberty. A corollary to this is that the tissues of the child are more yielding and more likely to give way under a sudden distending force than the more closely knitted tissues of older people. Hence it follows that, when additional demands are made on the heart muscle of the child, hypertrophy will take place more rapidly than in adult life and, under similar conditions, dilatation will be also more common. It is furthermore evident that almost every enlargement of the heart will be an eccentric one, that there will be no compensatory hypertrophy without considerable dilatation, and that unless the general bodily nutrition is very much impaired, simple dilatation will not be long existent before hypertrophy sets in.

Again, the general nutrition of the organism is apt to be much better in children than it is in adults, and the local nutrition of the heart correspondingly better. The degenerative processes so common in middle life—by which is meant not only the physiologic hardening of the tissues, but also the effects of exposure, hard work, alcohol, tobacco, and such other conditions as cause arterial capillary fibrosis—are practically absent in childhood. Hence we can eliminate from our consideration of the pathology of the child heart the permanent increase in resistance due to thickened arteries, the slow fibrosis and puckering of the various valve leaflets, especially those of the aortic orifice, and the narrowing of the coronary arteries with its subsequent reaction on the nutrition of the myocardium. From this it follows that in childhood peripheral resistance, with a single exception that will be named hereafter, is never increased. When these facts are considered in connection with the tendency to general good nutrition in childhood, one can easily understand why compensation is quick and thorough in the child heart, and why hypertrophy occurs regularly and quickly under conditions in which it is only occasionally seen in adult life.

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[*] Read in a Symposi[illegible] Disea[illegible] [illegible]en, befo[illegible] Philadelphia Pediatric [illegible] 10.

### EFFECT OF ACUTE RHEUMATISM ON THE HEART IN CHILDREN.

Lesions of the heart more often follow rheumatic affections in children than in adults. Indeed, these lesions must be considered not as a complication but as one of the manifestations of the rheumatic state. In children the joint lesions are at the minimum, and myocarditis, pericarditis, endocarditis, subcutaneous nodules and chorea—assuming that to be a rheumatic affection—are at the maximum. Pleurisy, tonsillitis and vasomotor and hemorrhagic phenomena as manifested by erythema and purpura are also comparatively rare after puberty. The rheumatic series may show itself, not by simultaneous outbreaks of several of these symptoms, but by the occurrence of each in succession, and, to cite Still in "Allbutt's System of Medicine," the history of a rheumatic outbreak in a child may be the history of the whole period of childhood. The heart inflammation is probably not so often a complication as in adults, but a primary manifestation of a rheumatic condition.

Again, the rheumatic disease of the heart appears to be very virulent in childhood. Lees, in his paper before the British Medical Association, in 1898, said that in 160 fatal cases of this nature, 35 of 115 died in the first attack, and 86 of 100 showed fresh rheumatism during the attack. The fatal result as a rule was not due to endocarditis, but to a much more serious condition, viz.: dilatation of the heart, especially when joined with an extensive pericarditis. Beside Lees, Cheadle and Sansom say in recent articles that dilatation of the heart is a frequent occurrence in the rheumatic affections of children. Lees shows very convincingly that by far the commonest lesion in the cases coming to autopsy is an acute myocarditis of the acute infectious form of the type, also seen in scarlet fever and diphtheria. In 115 cases this condition was present in more than one-third, macroscopically, and Lees concludes, and it would seem rightly, that microscopic examination would have very greatly increased the proportion. The condition was of far greater import, in his opinion, than any other lesions. He ascribed its existence to the direct action of the rheumatic poison, be it infectious or not, upon the heart muscle. He is supported in this view by Cheadle and Sansom. The resemblance between microscopic findings in several of the cases reported by these authors to those of the heart muscle in scarlet fever and diphtheria, as studied by the Germans, is most striking and suggestive.

The next most frequent lesion is a pericarditis, which was present in all but 9 of the 115 cases. In 77 the pericardium was adherent and the changes in the myocardium and pericardium combined, as they appear to be coexistent in the very great majority of patients, present conditions most favorable to the development of dilatation, and may be considered the most serious of the factors causing the heart failure.

Endocarditis must be considered of least importance in determining the immediate effect on the heart. As has been said, the lesions seldom occur alone, but each plays its part in a pancarditis.

The more modern methods of investigation have enabled us to realize fully the rôle played by the myocardium in rheumatic conditions, and the absence of such investigation explains the emphasis laid on the more evident disease of the endocardium by the older writers, and the discrepancy between their figures and those of Cheadle and Sansom.

The percentage of cases of rheumatism that are followed by endocarditis is two or three times as large in children as in adults. Roger, Picot and Claisses place it at from 75 to 78 per cent. of all cases. The report of the Collective Investigation Committee of the British Medical Association places it at 72 per cent. In adults Von Dusch puts the proportion at from 10 to 22 per cent., and the Collective Investigation Committee higher, i. e., 40 to 56 per cent.

The age at which these instances of rheumatic endocarditis occurred in the cases reported by Sansom, Steffen and von Dusch is as follows: Under 5, 48; 5 to 10, 135; 10 to 12, 81. The ages of the cases of the Collective Investigation Committee are as follows: Under 5, 5; under 10, 27; under 20, 196. That is to say, the number of such cases in the second five years of life is four to five times as great as for the first five years. An explanation for this may be found in the fact that rheumatism is apparently infrequent under 5. Vesnier places the percentage under 5, in 8631 cases, at 3.5 per cent.

### PEURPERAL INFECTION IN THE NEW-BORN.

In diseases of the heart occurring in the first few days of life, the cause seems to lie in the great susceptibility of new-born children to pyogenic infection. I have endeavored to call attention to this in a previous paper.

Three cases of myocarditis, reported by von Dusch, occurred during an epidemic of puerperal infection. The ages were from 4 to 16 days. Wagner describes a similar one of myocarditis. Steffen reports an endocarditis at 12 days and one at 5 weeks. Joseph Sailer reports one of endocarditis at 2 weeks, and von Dusch at least one at 3 days. In my own case of empyema, aged 10 days, there was a parenchymatous myocarditis. The mother was infected during labor, and the child probably was infected through the milk. Viti reported a somewhat similar case, aged 67 hours, which had a pericarditis. Runge, in a child 10 days of age, reports a pericarditis. In none of these in which the history is given was the mother infected until after the birth of the child, and hence they can not be considered to be intrauterine infections.

### ACUTE INFECTIOUS DISEASES.

In the acute infectious diseases attention is directed to the fact that myocarditis is of much greater importance than inflammation of the serous membranes of the heart. It occurs alone oftener here than in any other condition. While a pancarditis is not very unusual, the prevalence of the myocardial changes, especially in their relation to the clinical symptoms, is most interesting.

### DIPHTHERIA.

The fact that diphtheria causes acute changes in the heart muscle has been known since the introduction of modern methods of study, and as time goes on the existence and significance of such changes are more and more marked. It is quite unnecessary to go extensively into the literature. Our knowledge of the condition has advanced steadily and the list of names of investigators includes Birch-Hirschfeld, Leyden, Romberg, Fenyveffy, Rabot and Philippe. The most recent work has been done by Hallwachs, who concludes, after a study of fourteen cases, that the symptoms of heart trouble after diphtheria always depend on anatomic changes in the heart muscle due to infectious myocarditis. This results from the direct action of the diphtheria toxin. The extent of the lesion depends not on the continuance of the poison but on the virulence of the original dose. But the sudden stoppage of the heart in diphtheria, after convalescence is well established is probably not due to the toxin, but to some other and unknown factor acting on the already weakened myocardium. This unknown agent is probably of nervous origin, and is the same as that which causes other paralyses.

According to the investigations of Romberg and Pässler, the sudden collapse that sometimes occurs in the first week is due to central paralysis of the vasomotors, and sudden death in the later period of the disease, to myocarditis. It is probable that the toxin in each period attacks a wholly different part of the circulatory apparatus.

Myocarditis begins in the second week as a rule, and is seldom seen before. It may be very intense and lead to death in several weeks or several days. The affection of the serous membranes in diphtheria usually takes the form of a pancarditis, to use von Jürgensen's term, with the participation of the myocardium in the processes.

### SCARLET FEVER.

The work of Romberg has apparently settled the fact that the poison of scarlet fever, whatever it may be, alone and not mixed with pyogenic micro-organisms, may cause disease of the heart. He is supported in this opinion by von Jürgensen. His tables comprise the analysis of ten cases which were subjected to a very thorough microscopic examination. His figures show that the myocardium is oftener and more severely affected than any other portion of the heart. The tissue next most susceptible is the pericardium, and the endocardium is affected least often.

Pericarditis and endocarditis may follow scarlet fever, but are not as common as the inflammations of the myocardium. Oftener perhaps the three occur together as a pancarditis, in which any of the three tissues may be the place of the greatest involvement. It is very often impossible to distinguish a septic endocarditis from one due to the poison of scarlatina alone, and it is probable that in many cases the trouble is caused by a combination of the two agencies, and that the scarlatinal process has made the endocardium a point of lesser resistance for the entrance of the pyogenic cocci. Endocarditis of the walls of the ventricle is more common than valvulitis.

A very important, if more remote, effect of scarlet fever on the heart is the changes that occur in that organ as the result of scarlatinal nephritis. Many writers have noted that hypertrophy is a common sequence of such forms of nephritis. Friedlander, probably the most recent and authoritative writer on the subject, concludes: 1. That in children dilatation and hypertrophy of the heart are almost never absent in cases of well-established scarlatinal nephritis. 2. That the changes may affect both sides of the heart, but are more marked and more common on the left. The average increase in weight is 40 per cent, but it may be far greater than this. The increase in the capacity of the heart is in almost all cases very considerable.

In acute nephritides from other causes heart changes are not present as often as in scarlet fever. Riegel puts the cause for this on an increased arterial tension in scarlet fever, and says it is found only in cases that show such high tension. Von Dusch says it is probable that the increased tension acts on the heart weakened by a myocarditis, and that this lesion has as much to do with the dilatation as increase in tension. Strangely enough neither of them states why the tension should be so much more increased in scarlatinal nephritis than in the nephritis of other infectious diseases.

Steffen, Cheadle and Silberman have reported similar observations with about the same conclusions. In one of Steffen's there was much dilatation of the right ventricle, and he points out that dilatation occurs more rapidly in cases in which renal dropsy is present.

### MEASLES.

According to the principal authors measles has little or no effect on the heart of children. Occasionally there seems to be an exception, but it is probable that in these cases the disease is due to a mixed infection and not to the measles process alone. In an epidemic in Würzburg, in 1883, the heart was very often involved, but in this instance the course of the disease was said to be very peculiar and atypical, in this way supporting the above supposition.

### RHACHITIS.

According to the researches of Beneke, Steffen, von Dusch and Vogel the malformation of the chests in rhachitic children combined with the changes arising in the lungs from interference with their action, may produce hypertrophy of the heart. Beneke reports a series of cases in which there was absolutely no other explanation for the enlargement. He concludes that in rhachitic children the heart is at least of good size and is very often hypertrophied.

### THE REMOTE EFFECTS OF CONGENITAL LESIONS.

When it is considered how congenital anomalies may throw extra work on the various chambers of the heart, it is easy to understand how the heart may increase in volume and weight from these causes alone, and hence a short notice of them comes properly within the scope of this paper.

Intraventricular openings almost invariably cause hypertrophy and dilatation, and the right side is most affected. The reason for this, it is easy to see, is that the difference in the strength between the right and the left side causes the flow through the openings to be from the left to the right, and hence the right chambers have a greater amount of blood to handle than is normal.

Again, the congenital anomalies of the vessels may have a decided effect on the size and volume of the heart. This is rare, but Bednar[1] has observed considerable cardiac enlargement in a case that would at the present time have been termed one of status lymphaticus. There was hypertrophy of the thymus, lymphatic glands, liver and spleen. Von Dusch, commenting on this case, expressed the opinion that there must have been congenital narrowing of the vessels. Mayr, in 1862, described similar cases. Henoch reports two of enlargement of the thymus with dilatation and hypertrophy of the right ventricle. P[illegible] also [illegible]s observed fatal cases. The authors who have written on status lymphaticus in the last few years make no mention of heart changes, and a study of their cases reveals none. It is probable that von Dusch is right in supposing that such cases, in which enlargement of the heart was reported, were connected with congenital narrowing of the aorta.

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[1] Krankheiten der Ne[illegible] 1853.

Hypertrophy of the left heart may follow narrowing of the aorta in the region of the ductus botalli, as in a series of cases reported by Gerhardt, or the general narrowing of the aorta and blood-vessels described by Virchow in connection with chlorosis. Such changes are usually associated with hypoplasia of the heart, but, according to Von Dusch, cardiac enlargement sometimes occurs. Gerhardt has observed enlargement of the heart in epileptic children. This is probably caused by peripheral spasm.

The strain put on the heart by these congenital anomalies may make it a point of lesser resistance for the attack of the various infectious processes. Thus in six cases of rheumatic myocarditis and endocarditis reported by von Dusch, there were openings between the ventricles. In some reported by Buhl, Rokitansky and Redenbacker, of acute endocarditis following rheumatism, there were similar malformations. In hearts of adults statistics have shown that an acute endocarditis is generally found on a valve which is the seat of an old inflammatory lesion. In children this naturally can not so often be the case, as the opportunities for previous attacks must be less. It would seem as if the point of lesser resistance, which is furnished in an adult by an old endocarditis, may in the child be a congenital anomaly.

### LESIONS OF THE CARDIAC TISSUES.

I have yet to take up the lesions of the various tissues of the heart, and to summarize briefly under each the facts that have already been given.

### MYOCARDIUM.

The inflammations of this structure, that are of most importance in childhood, are: 1. Acute infectious, involving both the interstitial tissue and the parenchyma; 2, acute interstitial—suppurative; 3, chronic interstitial.

The causes of the acute infectious form have been sufficiently considered. The lesions are various, and the process may not be a very diffuse one, but may consist of irregularly distributed areas. It is generally, however, diffuse. The muscle fibers are strikingly degenerated. Transverse striations are indistinct or absent. The fibers may be split longitudinally or show vacuoles. Fatty degeneration can often be demonstrated, in frozen sections, by osmic acid. Nuclei are multiplied and sometimes fragmented. After the process has been in progress for some few days round-cell infiltration appears in the connective tissue between the muscle bundles. The process, according to some authorities, may often go on to abscess formation. The remote effect of such myocarditis depends on the virulence of the poison. It may revolve and leave barely a trace, or, if the destruction has been great and the patient has survived, there may be a diffuse fibrosis.

The acute interstitial form leads to abscess that may rupture into the pericardium, or endocardium, or may cause perforation of the heart walls or septum. This last lesion may closely resemble a congenital perforation. Cases have been collected by Steffen, René Blache and others. The most frequent appear to be infective embolism from pyogenic infections of various parts of the body, rheumatism, typhoid and pleuritis. In these infectious conditions it seems to me that a mixed infection must have played the principal part.

The lesions of the chronic interstitial form consist of general fibrous thickening and fibrosis. The cause is almost invariably syphilis, but it may follow healing of abscesses and may spread inward from a thickened pericardium. Syphilis, however, as has been said, is the most frequent cause. Steffen has collected five cases, all of the same type, i. e., with general fibrosis and small miliary gummata.

Adler, in his paper before the Association of American Physicians, in 1898, contributed to our knowledge of the subject the results of his examination of the hearts of four very young children with undoubted evidences of syphilis. Without marked macroscopic changes in the hearts themselves, microscopically he found endarteritis of the smaller arteries, increase in connective tissue and degeneration of the myocardium. It would seem, from his paper, that a more thorough examination might show the condition to be much more frequent than we have heretofore suspected. A chronic interstitial change in the heart muscle of a child is, however, a very rare condition. The reason lies in the absence of degenerative changes.

### HYPERTROPHY AND DILATATION.

Quick response to stimuli, ability of the general nutrition to recover itself, and the absence of degenerative changes in the coronary arteries render the heart of childhood much more liable to hypertrophy than that of the adult. These circumstances make compensation much more thorough and the number of cases of socalled idiopathic hypertrophy much larger.

The two principal causes of dilatation have been discussed under the head of rheumatism and myocarditis. Owing to the yielding nature of the child's tissue, dilatation always participates in any enlargement of the heart, and the volume of the chambers is invariably considerably increased; at the same time the walls are thickened. From what has been said it will be seen that simple dilatation without hypertrophy is of the greatest rarity, and only occurs—as has been noted by von Dusch—in conditions such as pertussis, where a great strain is thrown on the heart weakened by some infectious process. Hypertrophy comes from an increased demand on the work of the heart muscle.

Hypertrophy of the left ventricle is, in children, relatively less common than in adults, while enlargement of the right ventricle is more common. The reason of this is that the causes that produce hypertrophy of the left ventricle in adults are not present in children. The first of these is aortic stenosis, which is rare in childhood. Atheroma and aneurysm are almost unheard of at this age, and contracted kidneys, while occasionally reported, do not occur often enough to be taken into consideration.

To recapitulate the causes leading to hypertrophy and dilatation: 1. Conditions inducing hypertrophy are: *a,* valvular lesions; *b,* adherent pericardium; *c,* congenital narrowing of the aorta—left heart; *d,* congenital openings between the sides—right heart; *e,* rhachitis—right heart; *f,* scarlatinal nephritis—left heart. 2. Causes leading particularly to dilatation are: *a,* acute myocarditis alone or in combination with pericarditis; *b,* chlorosis and other anemias; *c,* severe forms of pertussis.

Failure of compensation after it has once been well established is rare in children. The local anemia which is often seen in the adult heart is prevented in childhood by the absence of degeneration in the coronary arteries. General malnutrition, however, may accomplish the same result in childhood as coronary atheroma does in later life. The diseases leading to this condition are probably most often typhoid or chlorosis.

### ENDOCARDITIS.

Acquired endocarditis is usually left-sided, and almost always in the mitral valve or its chordæ tendinæ. Congenital abnormal openings between the two sides of the heart; congenital stenosis of the pulmonary valves and malformations of them and of the aortic valves, appear to be predisposing causes. So also congenital narrowing of the great vessels, causing hypertrophy of the left ventricle, appears to render the heart more susceptible to change. These predisposing causes are naturally more important in children than previous lesions of the valve.

The condition must not be confused with the nodules in the valve-leaflets in new-born children, first described by Cruveilhier in 1849, and a few years later by Albini. These nodules are the size of barleycorns. They occur in the auriculoventricular valves of both sides of the heart. They are at first mucoid and later become fibrous. Albini has described twenty to thirty in one case. According to Bernays, these nodules are the remains of the primary simple valves of fetal life. They may show small hemorrhages which may become so considerable as to transform the nodule into a hematoma.

To recapitulate the causes of acute endocarditis, we have, in the order of their frequency: infectious fevers, especially scarlet fever, diphtheria, and typhoid, septic and pyemic conditions, tuberculosis and pneumonia.

It seems sufficient to classify endocarditis into the simple and the severe forms, the latter including the so-called ulcerative or malignant cases. The lesions are an inflammatory exudation in the connective-tissue layers, with coagulation necrosis of the covering layer of the endocardium. On these fibrin from the blood is deposited in layers forming vegetations. The vegetations come upon the walls of the chambers of the heart, as well as upon the valves. They can be reabsorbed or lead to thickening and shriveling with stenosis and insufficiency. The process—if severe—may spread to the neighboring myocardium and may even lead to abscess formation there. In 155 cases collected by von Dusch, the distribution of the endocarditis was as follows: the mitral alone was affected in 117 cases; the mitral in combination in 27; aortic alone in 12, aortic in combination in 13; tricuspid alone in 1, in combination 9; pulmonary alone in 1, in combination in 5.

Emboli may be swept away from the soft vegetations, and give rise to infarction. Such embolism is frequent in the arteries of the brain, especially in the arteria fossæ sylvii sinistra. In fourteen cases of embolism which Steffen has collected from the literature, there were nine of the brain artery. Most of these were in the artery of the fossa of Sylvius.

Chronic endocarditis is usually the result of the acute form. It is characterized by absence of the tendency to calcification, although cases of such degeneration have been observed. Insufficiency of the mitral valve is by far the most common of all the chronic lesions in children. As has been said, aortic disease is very rare. In adults, Willigk gives the ratio of disease of the mitral to the aortic as 32 to 22, and other observers give still higher proportions. Henoch gives the ratio in children as 11 to 2. The cause of this, as has been shown, lies in the greater rarity of chronic arteritis in childhood.

N. E. Corner Fortieth and Locust Streets.

## SYMPTOMATOLOGY OF VALVULAR HEART DISEASE IN CHILDREN.*

BY FREDERICK A. PACKARD, M.D.
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When the subject of the symptomatology of heart disease in children was assigned to me in the program of the meeting I considered that there was not much to be said regarding it. I find that there is in reality less to be said than I had calculated, as an analysis of case histories has convinced me more even than was the case before, that heart disease, especially in children, has no symptomatology, or rather that there can be said to be no group of symptoms pointing to the heart when so large a proportion of children show signs of heart lesions without the existence of any symptoms indicating their existence.

Consideration of the only method of even suspecting the presence or absence of heart disease in children has been allotted to another member of the society; I refer to physical diagnosis. By careful physical examination alone can we be certain or even reasonably safe in presuming that there is absence of heart lesion.

The very absence of symptoms makes the study of the symptomatology of heart lesions in children interesting if we endeavor to trace its cause. The condition of the circulatory system—heart and blood-vessels—in childhood is essentially different from that of the same organs in later life. In early life the more severe as well as the less important infections have had less time and opportunity for working their immediate and remote effects; intoxications—used as in contrast to the infections—by excesses in food and drink, and the use of possibly harmful substances, such as tobacco, have had no chance to impair the cardiac or vascular walls or to disarrange the nervous mechanism of the circulation; disorders of metabolism have had less opportunity to exert their effects, and finally general wear and tear have not had their influence. It would seem also in childhood that the greater plasticity of the tissues, which we may consider as present at least up to the age of puberty, may have much to do with the ability of the organism to adapt itself to abnormalities of the circulatory apparatus, and therefore show less evidence of their presence. Added to this it is fair to presume that in the formative period of childhood there is greater ability of the tissues to develop beyond the necessities of normal growth on the occurrence of need for such development.

Another explanation of the absence of symptoms in the heart disease of childhood is the fact that the child is in some respects more of a free agent than is the adult. A child made uncomfortable by effort remains quiet; the adult continues to perform the duties of life in spite of discomfort. A child made dyspneic by exercise ceases playing; the adult must continue to work. It is, therefore, easily seen that the child may present no symptoms directly pointing to the heart. It is because of this freedom from necessity for effort that many a child is brought for treatment because of indolence, listlessness or apathy, rather than for distinctively circulatory symptoms, physical examination showing the existence of cardiac disease.

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*Read in a Symposium on Heart Disease in Children, before the Philadelphia Pediatric Society, April 10, 1900.

One difficulty in dealing with the symptomatology of heart disease in children is, as in the adult, the varying symptomatology at different stages of the trouble. In children, however, this is probably less the case than in adults, owing to the remarkable adaptability of the heart in compensating defects and in holding its power until the strain of puberty of itself or combined with the necessity for work takes the place of simple opportunity for play. Consequently failing compensation is less often seen in children than in those of older years.

Another difficulty encountered is that of feeling convinced in a given case that myocardial or pericardial changes—and especially the latter—are not markedly influencing the clinical picture. Inasmuch as the present evening has been devoted to the consideration of valvular disease alone, the symptoms presumably due to valvular lesions uncomplicated by pericardial involvement alone will be considered.

Still another difficulty that I have encountered in assuming the consideration of the subject of the symptomatology is the indefinite limitation of my subject and that of physical diagnosis. I have taken the liberty of somewhat encroaching on the field allotted to another in that I have considered such phenomena as anemia, dyspnea, epistaxis and edema among the symptoms. It may be well in the first place to glance briefly at a few of the statements made by well-recognized authorities on the subject.

Gerhardt[1] says that the symptoms of endocarditis are shortness of breath, anemia, sometimes pain in the region of the heart, and palpitation, the latter symptoms only being present in older children. He also says that in general the symptoms of valvular failure do not differ from those of the adult, dyspnea, cyanosis and dropsy, enlargement of the heart and diminution of urine.

Octavius Sturges, in his well-known Lumleian Lectures on Heart Inflammation in Children[2], says practically nothing regarding the symptoms of chronic endocarditis although his lectures are most complete and exhaustive regarding all other phases of the condition. The reason for this is doubtless the slight importance attached by the author to this division of the subject. On the other hand, in dealing with the symptoms observed at the outset of heart inflammation—including endo-, peri- and myocarditis—in children he mentions restlessness, increased pallor, anxious expression, dyspnea, delirium and sometimes obstinate vomiting, frequent heart pain and tenderness over the region of the heart.

W. B. Cheadle[3] says: "simple endocarditis, acute or subacute uncomplicated by pericarditis or myocarditis, may run its course without giving rise to any cardiac symptoms," and adds that there may be no pain or dyspnea and even no murmur. Wasting and anemia are mentioned as symptoms. He questions whether the uneasiness, distressed expression, discomfort in the precordial region, palpitation, quickened or excitable pulse and rise of temperature seen in more active inflammation or in the case of fresh valvulitis attacking previously diseased valves are not due to involvement of the pericardium or myocardium.

A. E. Sansom[4] says, in discussing chronic endocarditis —valvular disease: "As a general rule the signs in infants and very young children are chiefly referable to inanition—emaciation, anemia, deformity of the thorax." Cough is mentioned as a prominent symptom. Again, "in children after the age of 4 years, symptoms more directly indicating disorder of circulation become manifest. Bleeding of the nose may be cited as one of these." He then speaks of the symptoms of failing compensation which resemble those seen in adults. Of dropsy, he says that it is "by no means uncommon, but it rarely follows the gradually ascending course usual in the adult. The œdema is either more general or more variable in the site of its manifestation." Under the heading of aortic valvular diseases he speaks of, and mentions, a case showing entire absence of symptoms.

Holt,[5] in speaking of acute simple endocarditis, says that it has no distinctive symptoms and that occurring in the course of acute articular rheumatism there may be an increase of the temperature and the severity of the general symptoms, but rarely anything more definite. Of chronic valvular disease (p. 581), he says that the only subjective symptom of much diagnostic value is shortness of breath on exertion. Symptoms mentioned as inconstant but occasionally present are precordial pain, attacks of palpitation, headache, epistaxis, anemia and cough. Later, he says: "It is rare to see all the symptoms of cardiac failure in children under 10 years, but about the time of puberty they are not uncommon.'

Barthez and Sanne[6] say, in discussing acute endocarditis: "Almost always a secondary disease, endocarditis, as is the case with pericarditis, will almost pass unnoticed if one does not take care to examine into the conditions where one can recognize its presence, that is to say if one does not practice auscultation." They lay stress on the absence of any addition of symptoms to those of the primary disease. Of chronic endocarditis they say that symptoms are sometimes altogether absent, but that sometimes there is palpitation and sometimes the symptoms seen in the adult. They examined 73 cases of chronic endocarditis, which they divided into three categories as regards severity of symptoms. Their first category included those without symptoms (latent). This included 21 cases (28 per cent.). Among their 73 cases there were 44 with mitral insufficiency, of which 13 presented no symptoms; 8 cases of mitral insufficiency with aortic insufficiency furnished 1 latent case; 5 cases of mitral insufficiency with stenosis gave 2 latent; 5 of mitral insufficiency with aortic stenosis gave 1 latent; 5 with aortic stenosis furnished 3 latent cases; 3 with aortic insufficiency gave 1 latent. In their second category they placed cases with palpitation, shortness of breath but no edema, enlargement of the liver, etc. This class included also 21 cases—28 per cent. The 44 mitral cases furnished 12 of this number, the 8 of mitral insufficiency and aortic insufficiency furnished 3; the 5 with mitral insufficiency and aortic stenosis a like number, while the 5 of mitral insufficiency and aortic insufficiency and narrowing gave 1 case. Their third class included those with marked symptoms, in which were placed 31 of the 73 cases—about 42.5 per cent. The 44 mitral insufficiency gave 19, the 8 with mitral insufficiency and aortic insufficiency 4, the 5 with mitral insufficiency and aortic stenosis 3, the 5 with aortic narrowing 1, and the 3 with aortic stenosis and insufficiency gave 1 case.

E. Weil,[7] in speaking of acute endocarditis, emphasizes the absence of symptoms and states that embolism may be the first phenomenon to call attention to the heart. In chronic endocarditis edema may be but little marked. This was the case in only 1 of 9 grave cases observed by him, while in 12 terminated by death from asystole, edema was absent in 5, but little marked in 2, appearing only eight days before death in 2, and with classic evolution in only 3. Of 56 cases analyzed by him, 11—20 per cent.—being fatal, 8 had serious functional trouble, 12 had slight functional trouble, while 24 —45 per cent.—were latent. Of acute endocarditis complicating rheumatism, he says: "It comes on insidiously in the course of acute rheumatism without exercising any well-marked influence either upon the temperature or upon the course of the arthropathies. Functional troubles (some palpitation, a little dyspnea, acceleration of the pulse) are rare." "When they acquire a certain intensity one ought to look for a complication —pericarditis, pleurisy, pulmonary congestion, parenchymatous myocarditis."

I have quoted these authors because they will express the views of all who mention the subject of symptomatology of heart disease as it is seen in children. While there is much in the literature regarding the physical diagnosis of heart disease in children, I have found but few who particularly consider the symptomatology. I should however mention, in addition to those from whom I have quoted, Charles West, W. H. Day, Bouchut and von Dusch.

In order to form some idea of the frequency with which symptoms pointing to disease of the heart were present, and their relative frequency, I have examined the histories of 78 cases, including both private ones and those admitted to the Children's Hospital. I had at first hoped to be able to arrive at some conclusions regarding the frequency of entirely "latent" cases, but found that this could not be accurately accomplished, owing to the varying care with which the histories were taken. I have, therefore, had to content myself with an analysis of the cases regarding the relative frequency of occurrence of various symptoms.

Excluding all not bearing internal evidence of care in examination as to the past history, I had remaining for analysis 56 cases. Of these 56, 29 had had shortness of breath, 10 palpitation, 9 edema of the legs, 7 precordial pain, 6 epistaxis, 5 had complained of headache, a like number had been anemic, 4 had complained of abdominal pain, the same number had some cyanosis, and 4 had had blood spitting. Only 3 had mentioned the presence of cough on lying down, or of vertigo, while other symptoms mentioned in only one or two cases were anorexia, persistent cough, night cough, fainting spells, weak spells, listlessness, edema of the face, gastrointestinal disturbance, loss of flesh, vomiting, cold hands and feet, and pain between the shoulders. In some respects the results arrived at somewhat surprised me. I was under the impression that a relatively larger number of heart cases gave a history of epistaxis and of cough on lying down; while the number of cases of edema rather surprised me, as I have frequently remarked to the hospital internes on the rarity of this symptom.

A few of these symptoms might be mentioned more particularly. Of the patients with dyspnea, the youngest was 3 years of age, most of them—seventeen—being over 8 years of age. The reason for this is probably the greater incentive to boisterous play when the child reaches the latter age. The younger patients are more content to keep within the limits of comfort. Precordial pain was not noted in any child below the age of 6 years, a fact probably explained by the vague location of pain in those below that age. The youngest patient in whom edema of the legs was noted was aged 6 years. Vertigo, as would be expected, was not complained of below the age of 8 years, younger patients being unable to explain their sensations with clearness sufficient to make the nature of the symptom apparent. Palpitation was noted in one aged 3 years, and in another aged 6, each of the other eight who presented this symptom being 9 years of age or older. From the notes there is nothing to show definitely that palpitation in the two little patients was subjective and not purely an objective phenomenon observed by the mother. I should judge that the latter was the case.

While my subject is merely that of the symptomatology of cardiac disease in childhood, I can not refrain from speaking of one point that I think should not be overlooked, especially in children. We speak of acute endocarditis, of chronic endocarditis and of valvular heart disease, as though they were three separate entities. This leads to possible error. Acute endocarditis is not a short-lived inflammatory process ceasing with the disappearance of the general infection giving rise to it. For a long time after the rest of the body has recovered, progressive inflammatory changes in the endocardium of the valve leaflets and chordæ tendineæ probably always continue. In that sense then we may look on "acute" endocarditis as a long-continued process, and the term "chronic endocarditis" is in reality a misnomer unless we make this reservation. Valvular heart disease is simply the result of distortion or thickening of the valvular structures by endocarditis; it occurs before endocarditis ends.

It is acknowledged by all that endocarditis can exist without evidence on physical examination. Symptoms are often absent and seldom pathognomonic. It is important, therefore, to always suspect the heart as a possible cause of symptoms otherwise unexplainable—such as anemia, vertigo, faintings, epistaxis, dyspnea—and to bear in mind that the presence of normal sounds over the cardiac areas does not rule out disease of even this important but not sole portion of the circulatory apparatus.

In belittling the importance of the subject allotted to me, I have been endeavoring to also show that, while there is no symptomatology proper of heart disease, the existence of any abnormality makes careful examination as to the functional activity and physical condition of the heart imperative.

258 South Eighteenth Street.

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DR. ALLEN A. WESLEY, late major and surgeon of the 8th Illinois volunteers (colored), in a paper which he read at the meeting of the Association of Military Surgeons, said that without any exception every member of the regiment under his charge who was given to the use of intoxicating liquors had the fever and in a more violent form than those who were total abstainers.

# PROGNOSIS IN THE HEART DISEASES OF CHILDREN.*

BY ARTHUR V. MEIGS, M.D.
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I have examined several text-books on the diseases of children, and in all of them I found that the discussion of prognosis occupied but very little space. It would not take me ten minutes to read to you all that I found in two or three text-books, and it will not be necessary, therefore, for me to occupy very much time in discussing the subject. It has impressed me, as it must have impressed every physician who has had the opportunity to see sick children, that when they suffer from disease of the heart the prognosis should generally be more hopeful than when adults suffer with heart disease. This is partly because they are more elastic than adults, whose tissues are stiffer and may almost be said to be brittle, and most of all, perhaps, because children who have not attained their full growth have the opportunity for repair during growth. Injury, or any distortion of the heart that is caused by disease may be effaced as the organ increases in size, for the usual tendency of Nature is toward the production of an ordinary type. If due allowance is made for the fact that the likelihood of recovery is greater than in adults, and for the fact that children often outgrow disease of the heart which would be incurable in adults, the prognosis in the heart diseases of children need not be very different from the prognosis in similar disease in older persons. In illustration of the capacity of children to overcome serious organic disease of the heart, I will describe two cases that were under my care:

A woman, now 34 years old, had acute endocarditis during the course of an attack of measles with which she suffered when she was 8 years old. After recovery from the acute attack and for some years afterward, there was a blowing systolic murmur at the apex of the heart, with increase of force of the cardiac impulse. Gradually these evidences of disease of the heart have disappeared and the patient is now a healthy woman. Physical examination yields no evidence of increase in the size of the heart, nor of valvular disease. It seems beyond question that in this case there was organic disease which was outgrown.

Another woman, now 23 years old, had a violent attack of acute chorea with endo-pericarditis when she was a child of 8. There was a murmur which was so loud that it could be heard at the distance of a yard from the child's body. I have seldom seen such severe chorea as existed in this case. There was almost constant and very violent muscular twitching. The illness lasted for a long time, for the child was confined to the house from the early part of January until the month of May. After her recovery from the acute attack, there was a blowing systolic murmur at the apex of the heart with irritability of the cardiac action. These signs continued to be present for some time after the attack, but I do not remember exactly how long. The patient is now a healthy, active girl, and careful physical examination fails to reveal any definite evidence of disease. There is no cardiac murmur audible, but possibly the heart-beat is a little irritable or of slightly increased force. I have often wondered if there are pericardial adhesions. However, as the patient enjoys good health, and as there is no positive evidence of disease of the heart, the case must be classed as one in which organic heart disease was outgrown.

The gravest prognosis should generally be given in cases in which there is conclusive evidence of the existence of great enlargement of the heart. In children, as in adults, it has been my experience that when once the heart becomes greatly enlarged, the patient very rarely recovers and generally goes from bad to worse until death occurs. The existence of valvular disease as shown by the presence of murmurs, even if these be very loud, I consider as of comparatively little importance. I have already expressed myself on more than one occasion as of the opinion that hypertrophy of the heart is not a compensatory condition, and that hypertrophied hearts are always hearts with degenerated walls. This subject is a most important one, but it is one that it would not be well for me to attempt to discuss in full just now. In my book on "The Origin of Disease," in the latter portion of the chapter on the heart, I have expressed my views on the subject.

The histories of two children who were under my care when I was one of the attending physicians to the Children's Hospital, illustrates how death generally comes if the heart is hypertrophied. These were two little girls who were in the wards a number of times in different years, suffering with heart disease and dropsy. In both the heart seemed to be greatly enlarged. They would stay in the hospital for a time and improve until they seemed to be almost well, but the evidence of the existence of cardiac enlargement always persisted. Both of them finally died after several years, the one at the age of 12 and the other at 14 years. Post-mortem examination revealed, in each case that the heart was greatly enlarged and the walls degenerated. In one of the cases the pericardial sac was entirely obliterated by adhesions, and the pericardium enormously thickened. I made careful microscopic examinations in these two cases, of other organs besides the heart, and although there had been little or no evidence during life of any disease except that of the heart, in both of them the microscope revealed the presence of disease of other organs —slight renal fibrosis and other conditions parallel with those found in adults when they die of similar disease. If in cases of heart affections the disease is confined to the heart alone and the other organs remain healthy, it is wonderful how much the heart can bear and yet the patient recover. But, on the other hand, if heart disease is but an expression that organic changes are widely spread in the other organs, then the prognosis must be bad. This is true of children as it is of adults. In the former, heart disease is less fatal than in adults, because they are, for the various reasons that have been given, able to recover from disease of such severity that it would necessarily kill older persons. If a child unfortunately acquires heart disease and survives it, he is more likely to live long than an adult would be under similar conditions, because the body of a child has more capacity to become accustomed to disease, and for this reason prognosis must be more favorable in children than in adults.

In conclusion, let me repeat that probably the most important difference between prognosis in heart disease in children and in adults is that the former have the better chance of recovery, owing to the opportunity they have to outgrow the disease.

1322 Walnut Street.

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*Read in a Symposium on Heart Disease in Children, before the Philadelphia Pediatric Society, April 10, 1900.

## THE PATHOLOGY OF CONGENITAL HEART DISEASE.*

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Under this term may be discussed all those conditions of the heart which deviate from the normal and which date their origin between the appearance of the earliest rudiments of the heart in the embryo and the expulsion of the fetus from the uterus.

Many classifications have been suggested, but none are thoroughly satisfactory, some being too broadly comprehensive, some only a detailed enumeration of the lesions found. Thus, one classification may be based on etiology, the anomalies being due to: 1, faults of development; 2, fetal endocarditis; 3, a combination of both, either one preceding the other and predisposing to it. Other classifications may be based on the morbid anatomy, on the symptomatology or on the prognosis. For the purposes and limits of this paper, the one already given will perhaps answer best, with a brief working-out along certain lines.

*Faults of Development.*—A combined anatomic and chronologic division of these may be made into three classes: 1, those occurring early, from the fourth to the sixth week, showing a heart with two or three cavities, *cor biloculare* or *triloculare,* with a single or imperfectly divided arterial trunk; 2, anomalies arising between the sixth and twelfth weeks, with imperfect auricular or ventricular septa, imperfect or misplaced vessels; 3, defects occuring after the twelfth week, resulting in anomalies of the valves, persistence of fetal opening, etc.

*Fetal Endocarditis.*—Other changes than those already mentioned are usually the result of fetal endocarditis. This arises often as the result of some infectious process in the mother, especially rheumatism, but any infectious fever may cause it; syphilis in the mother is said to play an important part. It may also occur without evidence of illness on the part of the mother. Whether it is necessary, in order to produce the endocarditis, for the germs of disease themselves to pass through the placenta from the maternal to the fetal circulation, an event which certainly happens in some processes, or whether the products of bacterial activity, the toxins circulating in the maternal organism, may by a process akin to dialysis enter the fetal blood, can not be stated in every case. Probability in favor of the latter view is strengthened by the form of endocarditis which is invariably the sclerotic or chronic and never the warty or verrucose. The right heart is far more frequently the seat of the inflammation than the left. The usual reason adduced to explain this is the greater amount of work done, as, in extrauterine life, the left side is more frequently affected. It has been suggested, however, by Rosenbach, that the richness of the blood in oxygen is the determining factor. Another reason given is that the right heart is more often the seat of congenital anomalies of the valves, and these are predisposed to inflammation, just as in extrauterine life diseased valves are a weak spot and prone to recurrent inflammation. Heredity is of great importance according to some authorities, in favoring both anomalies of development and fetal endocarditis, as shown by Moussous' classic cases.

With reference to the anatomic lesions, the following table from Holt's work is interesting, the order given being that of the frequency with which the lesions were present in 242 cases: defect in the ventricular septum; defect in the auricular septum or patent foramen ovale; pulmonary stenosis or atresia; patent ductus arteriosus; abnormalities in the origin of the great vessels; pulmonary insufficiency. The most frequently associated lesions were: pulmonary stenosis with defect of the ventricular septum; pulmonary stenosis with defect of the auricular septum; defects in both septa; pulmonary stenosis with defects in both septa.

1801 Pine Street.

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## THE DIAGNOSIS OF HEART DISEASE IN CHILDREN.*

BY J. P. CROZER GRIFFITH, M.D.

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This paper has been prepared on such short notice as to give me no opportunity to consult medical journals and text-book literature. What I have to say is, therefore, purely the result of my own experience with affections of the heart in children.

The first question which naturally arises in diagnosis is, is heart disease present, and if so, is it congenital or postnatal?

Let us take up first the study of congenital heart disease. The principal diagnostic symptoms of this condition are: cyanosis, clubbing of the fingers, thrill, characteristic murmurs, the absence of any great enlargement of the heart.

Cyanosis is peculiarly marked in congenital heart disease; in fact, I do not know of any other condition in which it is so intense. Even in severe forms of postnatal heart disease, with entire lack of compensation and decided blueness of the lips, I never have seen the blue-red tongue, the purplish cheeks, and the general blue suffusion of the body present in the congenital cases. This form of cyanosis, then, is alone an important diagnostic symptom.

Clubbing of the fingers, when present, is a very characteristic symptom. It occurs, it is true, in chronic disease of the lungs, but even the worst cases in this condition show clubbing no greater than, if as great as, that seen in congenital heart disease. Combined, therefore, with cyanosis, clubbing of the fingers is of great diagnostic importance.

The thrill of congenital heart disease is very characteristic. It is very intense, rough, and widely diffused. One may strongly suspect the existence of a congenital affection of the heart from the character of the thrill alone. Yet it is by no means always present.

The typical murmurs of congenital heart disease are loud, rough, and of great intensity. The intensity, in fact, is out of all proportion to the other physical signs connected with the heart. The situation of the murmurs, too, is peculiar. They are not commonly heard with greatest loudness at the apex, but rather over the base of the heart, the sternum and the aortic and pulmonary cartilages. It must be remembered, however, that even in young children there may be loud basic murmurs dependent solely on the existence of great anemia. We must be careful, therefore, not to make the diagnosis from the character of the murmurs alone. I shall not go into any extended discussion of the diagnosis of the nature of the individual valvular affections, from the character and position of the murmurs, further than to say that those present in pulmonary stenosis are heard loudest at the pulmonary cartilage, while those due to a perforate septum ventriculorum have their greatest intensity over the middle of the sternum. We must remember, too, that the presence of cyanosis in conjunction with a murmur points strongly toward the existence of stenosis at the pulmonary orifice, while the existence of cyanosis without any murmurs awakens a suspicion that there is complete closure of the pulmonary orifice or an anomalous origin of the great vessels.

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*Read in a Symposium on Heart Disease in Children, before the Philadelphia Pediatric Society, April 10, 1900.

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The fact that there is commonly no great enlargement of the heart in congenital heart disease is peculiar. At most there occurs some hypertrophy of the right side. The condition is in striking contrast to the very great enlargement which is so commonly seen in cardiac affections developing after birth.

The second question is, is there a postnatal heart disease? We must consider *a*, the value of the symptoms apart from the physical signs, and then *b*, the diagnostic value of the physical signs themselves.

*a*. It must be stated at the very outset that the symptoms of heart disease in childhood are quite commonly insignficant or absent altogether. Children have a peculiar power to acquire perfect compensation of a valvular defect. Consequently, heart disease in children is frequently discovered purely by accident, there often being no subjective symptoms. When such symptoms do exist, chief among them is to be mentioned shortness of breath. Very often the presence of this can be elicited only by careful questioning of the child or of the parents. Sometimes we learn that the little boy can not keep up with his companions in active games, or we find him listless and disposed to sit around and play at quieter games with his girl companions. In my experience, the existence of slight shortness of breath is quite commonly the only symptom. In more advanced cases, we may have the ordinary intense dyspnea characteristic of heart disease at any age. In estimating the value of shortness of breath as a diagnostic symptom, we must remember that anemic children may readily exhibit this symptom to a decided degreee.

Edema is a suspicious symptom. It quite commonly begins in the feet and it develops also in the abdomen. It is very important, however, when making a diagnosis, to remember that children become edematous quite easily under certain conditions. We have, for instance, the edema of post-scarlatinal nephritis, which, not at all infrequently, appears first in the feet and not first in the face, as we usually expect it to do. Then there is the edema of the feet which so often develops in marantic infants. Next, the edema dependent on grave anemia is not uncommon. Again, we must remember that ascites in children is not uncommonly due to a tubercular peritonitis, and not to a heart affection. I have at the present time under my observation one or two cases in which the diagnosis between a heart disease and a tubercular peritonitis is by no means certain. Finally, I have repeatedly seen in children a curious tendency to the development of marked and widespread edema without the existence of any discoverable cause whatever.

Faintness is a symptom occasionally seen in children with postnatal heart disease, but in my experience, it is not at all common. I recollect very well one child whose first symptom was a tendency to faint after he had climbed the stairs. Only careful study showed that the disease in this little boy was in reality a cardiac affection.

Precordial pain is in my experience not common in children. I have seen it marked only in advanced cases with extreme lack of compensation. In these I have sometimes found the pain very severe.

Palpitation is a symptom which is of very little diagnostic value in childhood, not so much that it is not present, as because children do not recognize the palpitation or do not know how to describe it. I have seldom found this symptom present.

Cough is in childhood a symptom of no great diagnostic value in cardiac affections. I have found it only where other much more prominent symptoms of the disease were present. In these cases it was an evidence of intense passive congestion of the lungs.

The presence of a decided degree of anemia is sometimes a diagnostic symptom of considerable importance. Many children who have heart disease for some time have a distinctly delicate and anemic appearance which seems to be the direct result of the cardiac affection.

I have found hemoptysis uncommon except in bad cases. The tendency to it, which is not at all uncommon in mitral stenosis in adult life, has seemed to me to be decidedly rare in childhood. I have come across it but very seldom.

*b*. Next, we have the consideration of the diagnostic value of the physical signs connected with the examination of the heart itself. The first question which arises naturally is, does the existence of murmurs prove the presence of heart disease? This is an old question to which the well-known answer is "no." The fact that anemia may be attended by very well marked murmurs in childhood as well as in adult life is well understood and has been already referred to. We have also the existence of what may be termed accidental murmurs, the origin of which we do not understand, but which can not be associated with any certain disease of the valves of the heart. Again there is the murmur which not infrequently develops during and disappears after fever. There are also certain organic murmurs produced outside of the heart, which simulate very closely the endocardial murmurs which are the subject of the present discussion. I refer to the murmur of pericarditis and the cardiopulmonary murmur which has often been described.

On the other hand, heart disease may exist, as we very well know, without the presence of any murmurs whatever, or the murmurs may perhaps come and go for reasons which we do not well understand.

In connection with the study of the heart murmurs, we have two other matters to be carefully studied also: the pulmonary second sound and the size of the heart.

With regard to the pulmonary second sound, we know that its accentuation is a common sign of disease of the mitral valve. In childhood, however, we must carefully remember that the second sound is physiologically accentuated; that is to say, in early and later childhood we expect to find the pulmonary second sound normally as loud as, or even louder than, the aortic second sound. No one can with certainty make a diagnosis of heart disease in childhood without bearing this fact in mind.

Then, with regard to the size of the heart, hypertrophy and dilatation as results of valvular affections become extremely marked in childhood, more so than in adult life. There are certain factors, however, which render the diagnostic value of this sign sometimes uncertain. For instance, the presence of a nephritis will naturally produce enlargement of the left side of the heart. On the other hand, an asthma with the consequent emphysema will cause the lungs to overlie the heart and make its size appear less than it really is. Then, too, we must remember that in childhood, before the age of puberty, the right side of the heart reaches somewhat farther toward the right than it does in adult life, and that the apex-beat is quite commonly in the fourth interspace instead of the fifth. If these facts be not borne in mind, one might readily make the diagnosis of hypertrophy of the right ventricle when no such hypertrophy was really present.

If, while bearing in mind the various diagnostic symptoms mentioned and the questions which arise in connection with them as already pointed out, we have reason to believe that postnatal heart disease exists, the next matter to be decided is, what variety is it? I can not here enter on this subject further than to say that in mitral insufficiency we expect to have enlargement of both ventricles, but particularly of the right, with very great accentuation of the pulmonary second sound. If one fails to find the accentuation of this second sound, in accordance with the age of the child, the diagnosis often remains somewhat uncertain.

In the case of mitral stenosis, the right side of the heart becomes enlarged, but usually not the left, and the pulmonary second sound is very greatly accentuated. Quite commonly in this affection we find a very marked thrill, which is diastolic in time. The murmur, too, is diastolic, thus distinguishing mitral stenosis from mitral insufficiency, which is systolic in time. With both these lesions, when compensation fails, one naturally gets the symptoms of pulmonary congestion. Other forms of heart disease are less common in childhood, and comments on their symptoms and physical signs must be omitted.

In general, it may be said that in diagnosis of postnatal cardiac affections in childhood we should observe the following points: avoid making a diagnosis from the presence or nature of murmurs alone; remember the altered position of the right side of the heart and of the apex-beat in childhood; remember that the presence of an accentuated pulmonary second sound is normal, not pathologic; remember that compensation is acquired very easily in childhood, and that the absence of symptoms does not prove the absence of cardiac disease; remember that the most suggestive symptom is dyspnea, and that edema must be studied most carefully before it becomes of value as a diagnostic symptom.

123 South Eighteenth Street.

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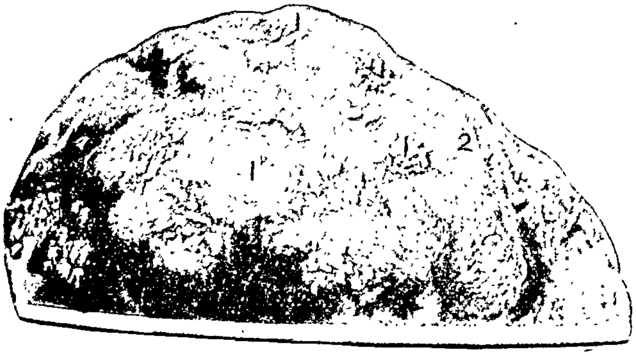
# REPORT OF A CASE OF PRIMARY CARCINOMA OF LIVER.

BY R. C. HARRIS, M.D.

ST. LOUIS.

Robert B., aged 57, a farmer, and native of Switzerland, entered the St. Louis City Hospital March 3, 1899, giving the following history: He had always enjoyed good health, suffering only with the minor ailments of childhood, and with an attack of double pleurisy at the age of 20. His family history was negative. He was accustomed to drinking on an average, five glasses of beer daily, and a small one of whisky early in the morning. He had smoked a pipe incessantly from 12 years of age. He denied having had syphilis, and has never been injured. The malady that ultimately caused his death began about two years ago, at which time, while laboring in the field he was suddenly seized with an excruciating pain in the pit of the stomach, the right side of the chest and the right shoulder, which compelled him to stop his work and rest. After a few moments the pain lessened, but a dull, dragging sensation came on. A physician who was summoned pronounced it a case of gall-stone colic, blistered over the site of pain, also gave cathartics and hypnotics. The patient made a slow recovery, the pain entirely leaving him, but the dull dragging sensation, "the feeling of weight," as he expressed it, mentioned above persisted in the region of the gall-bladder. Soon he noticed that if he attempted to walk fast, or exerted himself to the slightest degree, he would grow tired, dizzy and dyspneic. His ankles began to swell, the swelling extending gradually up the limbs, finally invading the abdominal cavity. His physician withdrew, by paracentesis, about a gallon of bloody ascitic fluid, giving the patient considerable relief.

From this time on he enjoyed fair health, suffering only with the dragging sensation mentioned above, until Feb. 1, 1899, when he began to suffer with a reiteration of the first attack. On entering the hospital, the following were the conditions: The patient was exceedingly well nourished, weighing about 225 pounds, not the slightest trace of jaundice or emaciation being present. The pupils were extremely dilated, but reacted to light and distance normally. The temporal arteries were tortuous and sclerotic, the tongue coated and flabby, and there were visible systolic pulsations in the jugulars. Examination of the chest revealed harshened respiratory murmur of both sides, also a few piping râles over the base of both lungs posteriorly. The apex-beat was about an inch to the left of the nipple and in the fourth interspace. A soft systolic murmur was heard over the mitral area, not transmitted in any direction; a similar one over the tricuspid area, this being plainly audible all over the sternum and right upper chest.



1. Cancer Nodules. 2. Thickened Peritoneum.

Further examination showed the abdomen to be large, rounded, and capped by a prominent caput Madusa. Several small petechial spots were seen about the neighborhood of the umbilicus. The lower portion of the abdomen was occupied by fluid, determined by succussion, percussion and aspiration. The upper part was occupied by a hard mass, which did not move with respiration. This "mass" extended down to about 1½ inches below the umbilicus; its lower border was rounded and smooth, except in one spot directly over the gall-bladder, where a single hard nodule was found, and which was exceedingly painful to the patient when pressed upon. This was about the size of a small walnut. A peculiar fremitus was elicited by palpation over this area, not unlike the peculiar fremitus of hydatids, but thought in this case to be a localized perihepatitis. Percussion showed the growth to extend upward as far as the fifth rib on the right side; its lower border became imperceptibly lost on the left side under the free margins of the ribs. I succeeded, by the use of the trocar, in withdrawing about a gallon of a sero-sanguinous fluid, which microscopically showed the presence of leucocytes, pigment and blood, the latter being demonstrable by the Teichman hemin crystals.

Uranalysis showed: specific gravity, 1010; straw-colored; acid reaction; slight trace of album[illegible] heat, nitric acid trichloracetic acid test; no sugar by any of the ordinary tests, indican present in small quantity, by Jaffe's chlorin test; no bile either by Gmelin's or Pettenkoffer's tests; microscopically, the hyalin and granular casts were seen. Blood examination showed a marked leucocytosis. No examination of stomach contents was made, owing to the enfeebled condition of the patient, also to the fear of rupturing, with the stomach-tube, a varix that might have been present at the cardiac end of the stomach, and be the cause of a fatal hemorrhage.

Palliative treatment with stimulants was resorted to, but the patient continued to sink rapidly and died of edema of the lungs, at 11:45 p. m., the day following his admittance.

Necropsy, four hours after death, gave the following: The mouth and esophagus were normal, the lining membrane of a faint reddish tint; the thyroid gland was normal, likewise the bronchial and cervical glands; the pleural cavities contained a small amount of fluid—not hemorrhagic; both lungs were firmly connected to the walls of the chest by firm, old adhesions and both were edematous below, emphysematous above, partially condensed from hypostasis, and loaded with pigment. The pericardium and heart were unaltered, with the exception of the mitral valve, which was slightly thickened. Several ounces of a bloody ascitic fluid were found in the peritoneal cavity. The diaphragm was pushed up as high as the fourth rib on the right side, the fifth on the left, and the upper surface of the liver was firmly adherent to the peritoneum of the epigastrium, and opposed to the anterior parietal wall of the abdomen, over a space measuring nine inches. The liver was greatly altered by numerous cancerous nodules, the left lobe being especially studded, the nodules varying in size from a cherry to a walnut, and the surfaces were covered by numerous ramifications of blood-vessels, many presenting cicatrix-like depressions, or umbilication in the center. They were of a yellowish-white color, reticulated, few being soft. The vessels of the capsule of the liver were intensely injected. The gall-bladder was contracted, but otherwise normal, also its ducts, the common and the hepatic. The portal vein contained no coagula. The hepatic artery was much dilated. On section of the organ, several similar nodules came into view, nearly all being umbilicated. The spleen was slightly enlarged, otherwise normal. The stomach and intestines were apparently normal, also the pancreas, mesentery and retroperitoneal glands. The kidneys showed all the signs of chronic interstitial nephritis, and the bladder showed the result of a chronic cystitis. The prostate gland was hypertrophied, otherwise normal.

Microscopic examination of the cut specimen showed the growth to be an adenocarcinoma.

Speaking in general, in cases like the above, I might say that of the many gross lesions that invade the cholopoietic system, that of primary carcinoma seems to be the least mentioned in medical literature. This may be owing to the fact that many cases pass through their course with few, if any, typical symptoms. Primary carcinoma of the liver is indeed rare, almost all those of this system mentioned in literature being of the secondary or metastatic type, and are very common. They form about three-fourths of all malignant growths in the liver, and of these two-thirds are secondary to carcinoma of the portal area, and one-third to primary ones elsewhere. (Tyson.) According to Osler, they rank third in order of frequency in the internal organs, following closely on the cancerous affections of the uterus and stomach. Frerichs, in his work on "Diseases of the Liver," gives statistics showing that of all the malignant growths of this organ, one-fourth are primary. Primary cancer may occur in one of three types, first, the massive type in which the growth is usually single, large and occupies the site at, or about, the gall-ducts; it is generally of a grayish-white color, and may reach 8 to 10 cm. in diameter. The second type, known as the nodular, receives its name from the many nodules that occur on and throughout the liver substance. These nodules vary greatly in size and may range from that of an apple to a pea.

These growths are usually opaque, and varying from a white to a dirty yellowish-brown color, due to bile pigments, hemorrhages and decompositions within the malignant area. As a rule the superficial nodules project above the surface of the organ, and may in the emaciated subject be felt through the thin abdominal walls. A close examination of many of these nodules will reveal the presence of umbilication, due to the fatty metamorphosis of the central cells, with subsequent liquefaction and absorption, leaving only a residue of connective tissue and partially obliterated blood-vessels. In the third type, we have a rare form, a form in which the organ is but slightly enlarged; this variety is usually associated with the cirrhotic liver, presents a yellowish-green color, and has been termed the cirrhotic carcinoma. All varieties of carcinoma, either primary or secondary, are liable to undergo degeneration; especially is it so with the secondary forms, the change being as mentioned above. Large hemorrhages may occur, due to a rhexis of the blood-vessels in and about the cancerous area. Histologically, these varieties may be either of the epitheliomatous alveolar or trabecular types, being composed of polyhedral, cuboidal, cylindrical or giant cells.

All of the primary forms start in the liver cells and may be called true epitheliomata. In some forms of the primary type, especially the nodular, cystic formations may be seen. (A case by Dr. Brunton, St. Bartholomew's Hospital Reports, Vol. xii.) In the trabecular forms, we find some resemblance to the adenomata in general, hence some writers have termed this the adenocarcinoma. In the primary forms, the peritoneum covering the liver, diaphragm, duodenum, stomach, spleen and pancreas is liable to become involved by continuity. The lymphatics may suffer, and through the lymphatic vessels, the disease may be propagated to deep-seated glands in other portions of the body.

A hepatic carcinoma is generally of a lardaceous consistency; in rarer cases the mass is hard and cartilaginous or sometimes may be brain-like and almost fluctuating. Its surface, on section, usually presents a dull white color, interspersed with a greater or less number of red spots or streaks, according to the degree of vascularity of the mass. Surrounding the mass, there is seldom any distinct capsule or membrane; ordinarily the new growth passes, in an imperceptible manner, into the surrounding liver tissue. Most of the morbid changes originate from the interlobular connective tissue. Pari passu with the deposition of the cancerous matter important vascular changes take place. As the carcinomatous material is gradually deposited, new branches of the hepatic artery are forming, with a relative diminution in the branches of the portal system. Coursing throughout these cancerous nodules many branches of the hepatic artery are seen, some of which may attain a very large size and may be the cause of a fatal hemorrhage later on in the morbid process. Changes also take place in the lymphatic ducts, which may become swollen, thickened and beaded, due to infiltration of the vessel walls with cancerous material.

Primary cancer of the liver rarely extends widely throughout the system. It occupies an inferior position in this respect to cancer of the mammæ and uterus. The further extension of the disease is affected first by continuity of the peritoneal envelope with the investing membrane of the duodenum, etc. In many cases the mode of extension is assisted by the newly-formed adhesions. The lymphatic vessels and veins form another source of propagation of this malady. By way of the former the disease extends to the lymphatic glands in the fissure of the organs to the celiac glands or to the anterior mediastinum or to the thoracic duct, and may finally invade the deep cervical glands.

As to the etiology of this affection, very little is known. Age probably heads the list, cancers belonging pre-eminently to the latter decades of life, coming on during the age of physiologic decline. Sex in all probability exerts little or no influence as a predisposing element. In males, according to the majority of writers, they seem to predominate. Some consider them more frequent in females, owing to the fact that gall-stones are much more frequent in those of this sex, and to the importance which they play as a causative factor in production of malignant growths. (Stengel.) Trauma, nervous influences, heredity, etc., can only act as secondary factors.

As to the clinical history of cancer of the liver, this varies greatly, because the local symptoms, which in themselves are diagnostic, are at one time prominently developed from the onset, but at another remain either undefined or latent. Cases are met with, although they are few, where all signs of hepatic disease are wanting, where complaints of an undescribable or undefined character, as indigestion, constipation, etc., together with disordered innervation, are at first the sole symptoms, and where the increasing cachexia, ultimately terminating in death, is the only symptom of an important lesion.

In conclusion I will state that this case is interesting to the profession for one of three reasons: 1. Because it was a disease undoubtedly primary to the liver; we were not able to find the smallest macroscopic nodule that would be suggestive of a primary or malignant focus elsewhere. 2. Because all symptoms diagnostic of malignancy were entirely absent, especially the ever-present cachexia and jaundice, showing how utterly impossible it is in many of the cases to make a correct ante-mortem diagnosis. 3. Because the disease extended over a period of about two years, the average duration of these affections lasting from six months to a year.

1303 North Garrison Street.

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# VENOCAVERNOUS ANGIOMA.*

BY ANDREW L. FULTON, M.D.

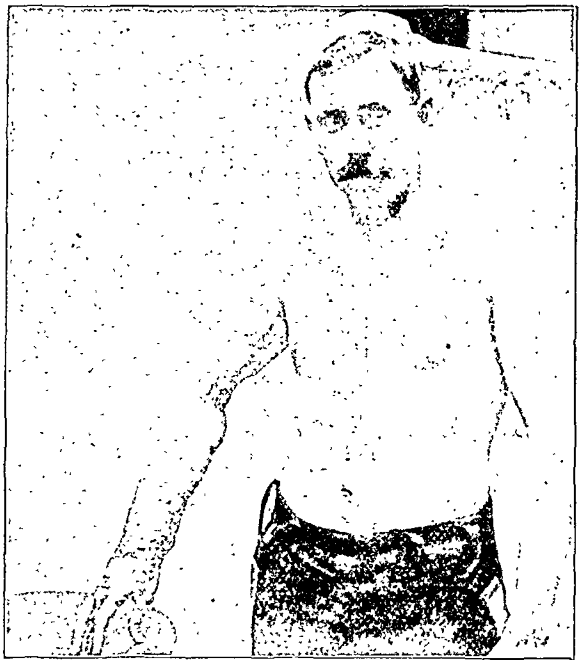
Professor of Operative and Clinical Surgery at the Kansas City Medical College, Professor of the Principles and Practice of Surgery and Clinical Surgery at the Women's Medical College, and Surgeon to the German Hospital.

KANSAS CITY, MO.

The following extraordinary case I shall call *venocavernous angioma,* for want of a better name and for descriptive purposes. The patient was first seen by me about March 1, and continued under my observation until the operation was performed, the data being as follows:

Mr. H., 48 years of age, born and raised in Virginia, gave a family history that was negative. Within a few months after his birth it was noticed that his right arm was not like his left, in appearance, but little was thought of it until he was about 4 years of age, when there was marked discoloration along the course of its superficial veins. This discoloration, of bluish appearance, continued to increase very slowly, although it gave him little or no trouble for several years. He was subjected to all kinds of labor incidental to farming, which he continued to perform with increasing difficulty until he was about 22 years of age, when he could no longer allow his arm to be lowered for any considerable time, on account of the severe pain. For several years prior to this, however, he had performed very little manual labor with his right arm. Subsequently he engaged in various occupations that did not require the use of the arm to any great extent, but it was never free from pain unless elevated. During the last fifteen years or more he has been obliged to carry his hand above his head nearly all of the time. In walking along the streets he could be seen with his arm apparently resting on his head, as if his hat was about to blow off.

On or about Oct. 1, 1899, while passing through the doorway of his barn, a violent hemorrhage occurred, threatening his life, and he presumed that he had struck his arm against some protruding obstacle as he passed in, but was not certain; it is possible, therefore, that there was a rupture of the exceedingly thin integument at the point of hemorrhage, independent of traumatism. Dr. W. F. Kuhn was called in and arrested the hemorrhage by the use of pressure forceps, when the wound promptly healed and the patient went about his businesss as usual.



Venocavernous Angioma.

I was called in consultation with Dr. Kuhn about six weeks before the amputation referred to later. At that time the cavernous tumors extended from the tips of the fingers to a point beyond the shoulder-joint. The index finger was particularly enlarged by venous caverns. On lowering the arm the blood would rush to the tips of the fingers, by gravitation, and on raising it again the same flow could be seen falling toward the shoulder-joint, and he said he could feel it as far as the chest walll. The returning blood seemed to be governed almost by gravitation. The skin covering most of the arm was exceedingly dark and apparently not thicker than tissue paper, when the arm was lowered. I advised an attempt at girdling about the middle of the forearm, at first with a view of ligating the veins in two places and dividing between them. If this had succeeded in the forearm I expected to have proceeded in like manner in the middle of the arm, and this operation failing I had determined to amputate at the shoulder-joint. The case did not present the usual neoplasm that we find in cavernous angiomata, but simply sacs of venous blood extending from the tips of the fingers to some distance beyond the shoulder-joint.

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*Read before the Jackson County Medical Society, May 10, 1900.

The patient entered the German Hospital on April 17. The next morning, after the usual preparations for amputation, and just before placing him on the operating-table Dr. Franklin E. Murphy photographed the arm as shown in the illustration. The pressure and pain were so great that the patient could scarcely hold his arm by his side long enough for the preparing for and taking of the picture. I believe that if at any time his arm had been held in this position for two hours or less, even had he been able to endure the pain, the skin would have ruptured. After obtaining the photograph, Dr. W. F. Kuhn administering the anesthetic, I operated, assisted by Dr. George Hamel and Dr. Murphy. Barely nicking the skin of the forearm, I opened up a large sac and enormous quantities of venous blood poured out. I soon discovered that there were no veins to be found anywhere, and therefore abandoned this operation and proceeded to amputate immediately below the shoulder-joint, as rapidly as possible. I realized four dangers in this case: 1, the danger from immediate hemorrhage; 2, the entrance of air through these venous channels; 3, embolism within the first two or three days, and 4, thrombosis within two weeeks or more. The first danger was anticipated and guarded against and possibly the second was overestimated. The other dangers in the case were remote and we could have had no control over them. There was some little difficulty in stopping the blood that gushed from the axillary region outward; this venous hemorrhage occurring in large quantities from many sources, and probably preventing air entering the sinuses. As high up as I could feel, nearly to the subclavian vein, there was one sinus, so large that I could thrust two fingers into the cavity, which was what under normal conditions would be the venæ comites. As rapidly as possible we grasped the tissues surrounding the blood-channels, tied them en masse, and ligated the axillary artery low in its course.

On examining the arm after amputation, we found all the adipose tissue absorbed and a great deal of the muscular tissue destroyed, also the humerus, the only bone we examined, was extensively eroded in several places from pressure absorption. Doubtless the bones of the forearm and hand were similarly involved, but we could not ascertain their condition without destroying the pathologic specimen as prepared. The caverns that served as blood-channels were partitioned off more or less by septa resembling cobwebs; these septa were composed of connective tissue, trabeculæ. There was not a vein to be found anywhere in the arm. The caverns involved the skin, which was the only external covering, and this was in many places as thin as tissue paper, while internally the cavernous spaces seemed to be supported by the deep fascia alone. The only reinforcing supports that these channels seemed to have were the web-like septa, or trabeculæ referred to above.

On examining the authorities in my library I fail to find anything like a counterpart to the case, particularly as relates to the extensive involvement, superficial and deep. A remarkable feature was the furious flow of venous blood outward from the axilla, and it must have come from the veins of the head and neck as well as those of the shoulder and trunk of the right side. I have little doubt that the subclavian vein and the smaller veins emptying into it and the axillary vein are mere caverns like those already described.

The patient has made an uninterrupted and rapid recovery without any suffering.

*429 Deardorff Building.*

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# MYOMECTOMY DURING THE SIXTH MONTH OF PREGNANCY. RECOVERY.

BY EUGENE R. LEWIS, A.M., M.D.
KANSAS CITY, MO.

As a member of the committee on the progress of surgery in the Missouri State Medical Society, I have asked the chairman to allow me to present this paper, which contains the report of a successful myomectomy made during the sixth month of gestation. No successful case of the kind is on record, so far as my knowledge goes, and I have been diligent in my efforts to find one recorded. Since the books at my command did not contain the information I desired on this subject, I addressed letters to a number of the prominent surgeons and physicians of our state and country. I quote from the letters of Prof. Howard A. Kelly, of Johns Hopkins University, Prof. Nicholas Senn, of Rush Medical College, and Prof. E. E. Montgomery, of Jefferson Medical College. Professor Kelly says: "I know of no case of intramural fibroid, i. e., one with a thick capsule of uterine muscle over it, which has been removed in pregnancy without provoking abortion," etc. Professor Senn says: "I have done many enucleations but without similar results; the case deserves a permanent place in literature. My enucleations were made on the non-impregnated uterus." Professor Montgomery says: "It has not been my privilege to operate upon a fibroid, intramural variety during pregnancy, etc." It is possible I may yet find that I have not made the first successful myomectomy upon the pregnant uterus, but so far, I am proud to be able to claim priority for my native state in this direction. The patient, Mrs. Pauline A., 27 years of age, primpara, was brought to my office in November, 1899, by Dr. S. D. Smith, of Cowgill, Mo. I had several examine her with me, and Dr. Smith had others do this, for her condition seemed to be rapidly growing worse and worse, and her distress called for action. Myomectomy as described by Howard A. Kelly was performed on the patient Nov. 27, 1899, at the hospital, before the class of the Women's Medical College, assisted by Drs. T. B. Thrush, B. L. Sultzbacher, Nannie P. Lewis and others. The uterus was in the sixth month of gestation, and the tumor, as large as a large orange, was situated superior and anterior to the tube on the right side. An incision in the linea alba, nine to eleven inches in length, was made to allow the extrusion of the entire gravid uterus and its appendages. The tumor did not involve the Fallopian tube, but projected out from the uterus like a large knot on a log. The serious complications liable to arise from an effort to remove the solid fibroid tumor were not underestimated, but were well considered. The rapidly failing health of the patient, the great distention of the abdomen, in-fact the congeries of conditions present in the case were rather dazzling, but the relief of the patient was imperative, something had to be done and as instantaneously as possible. A mistake in diagnosis led to the operation, as the tumor was supposed to be occupying the tube, and not connected at once to the uterus proper. The child could be plainly felt in motion beneath the thin walls beyond the growth. Realizing the situation, the question was hurriedly raised as to a complete hysterectomy, but as the operations of that character within our knowledge and experience had all proved fatal at this advanced stage of pregnancy, it was interdicted; so but one of two things remained for us to do instantly, either return the entire mass and try to close the abdomen, or try to remove the growth from the wall of the uterus and return what was left. I at once made an incision over the dense growth, about five or six inches in length, in the uterine muscle wall, and quite rapidly hulled out the tumor, leaving free hemorrhage to contend with at a limited area of the surface exposed. Very deep sutures were used to control the bleeding, and the opening in the uterus was closed with interrupted sutures; over the outside of this closed incision I laid a strip of iodoform gauze, one end of which I left exposed on closing the abdominal incision. The fourth day, I removed this gauze and on the twenty-eighth she was allowed to go to her home at Cowgill, Mo., forty-five or fifty miles distant. She was confined at full term, March 11, 1900, just 3½ months after the operation. Dr. Geo. B. Cowley, who attended her, wrote that mother and child were doing well and that delivery was made without forceps, as I had advised, for fear of a rupture of the organ in a prolonged labor.

One point I wish to call attention to as regards the relation of the placenta to the tumor, viz., the placenta seemed to have its attachment immediately beneath the growth, for on all other parts of the uterus it seemed as thin and yielding as a bladder. In fact, the thinness of the walls of the organ was a great surprise to me, and the psychologic effect made on me during the process of manipulation is permanent. There were no points in connection with the convalescence worthy of special mention. The patient's condition seemed to improve continuously after the shock of the operation had passed off. She took chloroform poorly, which was an additional source of uneasiness, but she rallied from it during the first thirty-six hours, after which all was well, and an uninterrupted recovery followed. A little over a week since—May 7—a letter from the patient's physician, Dr. Cowley, says: "I saw the baby yesterday—about two months old—mother and child well."

Tenth and Walnut Streets.

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# Therapeutics.

### Treatment of Rheumatic Diseases of the Heart.

In the treatment of acute rheumatism in the adult, Sansom administers sodium salicylate in 20-gr. doses, with 5-gr. doses of ammonium carbonate, or 20-minim doses of aromatic spirit of ammonia in an ounce of camphor-water, every two hours until six doses are taken, or until the temperature has fallen and the pain is eased. Subsequently, the administrations are reduced to every six or eight hours. With this mixture may be combined alkaline carbonates, especially sodium carbonate, in 20-gr. doses. Any recurring wave or storm of the disease is treated in the same way as the earlier symptoms, and the treatment is kept up from three to six weeks. In some cases sodium dithiosalicylate may be employed in 3-gr. doses every eight hours in cachet or chloroform-water, with extract of licorice. In the treatment of rheumatic pericarditis, an ice-bag may additionally be suspended over the heart for a long period. Failing cardiac power is best treated by the frequent administration of ammonia and similar diffusible stimulants in small doses, with camphor-water, or the hypodermic injection of from 1/50 to 1/30 gr. of strychnin. The application of a continuous galvanic current in the areas of the vagi has seemed to be valuable in the treatment of the rheumatic heart and its more severe manifestations.—*The Lancet*, March 31, 1900, p. 923.

### Treatment of Tuberculosis with Sodium Cinnamate.

C. A. Ewald reports that he has not been able to secure as favorable results with cinnamic acid in the treatment of tuberculosis as he had been led to expect by Landerer. But at the same time they were sufficiently encouraging to warrant further tests of the "hetol." He is inclined to attribute Landerer's success to his general hygienic treatment, observing that more cases of phthisis recover by the natural factors, the innate healing powers of the organism, than is generally accepted.

### Hemoptysis.

Dr. M. E. Chartier, of St. Louis, writing in the *St. Louis Clinique*, says that he generally prescribes:

| | | |
|---|---|---|
| ℞. | Tinct. of iodin | ʒi |
| | Camphoræ pulv. | |
| | Essential oil of tar, āā | ℥iiss |
| | Hoffman's anodyne | ℥ss |

M. Sig. Five to 20 inhalations at a time, to be repeated from two to four times daily.

### Thyroid Extract as an Emmenagogue.

At a recent meeting of the Liverpool Medical Institution, Glynn related that in many cases in young girls, in whom there was temporary amenorrhea or a delay in menstruation in consequence of slight developmental changes, the administration of thyroid extract in doses of 1/2 gr. once a day, generally given at bedtime, proved sufficient to re-establish or to institute the function of menstruation.—*British Med. Jour.*, No. 2050, p. 905.

### Purifying the Air in a Room.

In order to purify the atmosphere of the room inhabited by a phthisical patient the following may be plentifully and frequently sprayed:

| | | |
|---|---|---|
| ℞. | Guaiacol | 10 |
| | Acidi carbolici | 6 |
| | Eucalyptol | 8 |
| | Mentholi | 4 |
| | Thymoli | 2 |
| | Ol. caryophl | 2 |
| | Alcoholis (95 per cent.) | 170 |

Mix and dissolve.—*Louisville Mon. Jour. of Med. and Surg.*

### Therapeutics of Adonidin.

Stern finds adonidin (*Merck's Archives*, May) of great value in "smoker's heart," where the beat suddenly becomes much stronger, indicating the increased cardiac activity from toxicosis. For the amelioration of this disorder he gives the glucosid in this form:

| | | |
|---|---|---|
| ℞. | Adonidin | 005 |
| | Ammonium carbonate | 1 |
| | Camphor | 03 |

M. et fiat. powd. xxx. Sig. One three times daily.

*Adonidin is not a mere succedaneum of digitalis, for while* the physiologic action of the drugs is identical to a certain degree, its prompt and energetic action makes it perfectly safe to use it in such pathologic conditions as fatty degeneration, pericarditis, simple hypertrophy, compensatory and certain atheromatous conditions, where digitalis, if given at all, should be used with the utmost caution. In rapidity of action, adonidin almost equals nitroglycerin, while in certainty of action it not only equals it, but surpasses spartein sulphate, caffein and digitalis. Its diuretic action is limited, being about that of digitalis, and its greatest diuretic force is exhibited in conditions accompanied by dropsy and low arterial tension. Its action on the body is twofold; in a healthy individual it causes slight increase in temperature, while in a pyretic patient it lowers it, but there is no instance on record where it produced a fatal effect in man. The dose varies from .002 gram to .005 gram, taken three to four times a day, These smaller doses usually relieve the heart symptoms, and the largest—.01 gm.—acts on the edematous condition and produces diuresis.

### Sodium Chlorate in Gastric Affections.

Gastric affections treated with sodium chlorate, in daily doses of from 5 to 8 gm.—75 to 120 gr.—are said to be usually much benefited. Soupault reports that every variety of dyspepsia is clearly improved by it, and in cancer the pains, nausea and vomiting decrease or entirely disappear; the patient eats much more and with less digust, the hematemeses cease and the general condition improves. In gastric tumor, however no benefit was obtained. In chronic gastritis, no matter what the cause or anatomical form, the results were also appreciably good. The action of sodium chlorate is particularly excellent in hypersthenic dyspepsia, or hyperchlorhydria and in the conditions resulting—gastrosuccorrhea and gastric ulcer—exercising a lasting result. In the paroxysmic attacks so frequent in sufferers from hyperchlorhydria and ulcers the effects are particularly brilliant. In asthenic dyspepsia, however, the effect is doubtful or altogether insufficient. In the doses named no ill effects were ever observed even though the remedy was given for several months.—*Merck's Arch.*

### Alopecia.

℞. Resorcini ..............................ʒii
Acidi salicylici......................gr. xxx
Castor-oil ..............................flʒi
Rectified spirit........................flʒvi
Ol of bergamot.........................flʒi
M. Sig. Rub well into the scalp every night.

When greater stimulation is desired one may use:

℞. Mercuric chlorid......................gr. xii
Betanaphthol .........................gr. xl
Castor-oil ..............................flʒii
Rectified spirit
Bay rum, āā..............................fl℥ii

—*Schamberg: Polyclinic.*

## Medicolegal.

**A "Man" in Legal Definition.**—Under the Wisconsin statute, which provides that "any man who commits fornication with a sane female of previous chaste character, under the age of eighteen years, shall be punished," etc., the Supreme Court of Wisconsin holds, in the case of State vs. Seiler, that the word "man" means a male person who has arrived at the age of puberty, or is capable of committing rape, and is not limited to a male person over the age of 21 years.

**One Thousand Dollars for Mistake in Message.**—A drummer, whose wife had been quite sick but was somewhat better, after having arranged for a telegram to be sent to him at a certain place to advise him of her condition, left home to follow his business. The message, "She is much better," was sent to him, but when delivered read, "She is no better." This he understood meant that she had relapsed and was much worse. It caused him great mental anguish, and to return home at once. Under these circumstances, a verdict for $1000 damages, the Court of Civil Appeals of Texas does not consider, case of Western Union Telegraph Company vs. Patton, sufficient to justify it in holding that the jury that returned the verdict was influenced by improper motives.

**Overcoming Presumption of Insanity.**—When insanity has been adjudged or once proved to have existed, it is presumed to continue. But this is not a conclusive presumption. The presumption arising from an adjudication of insanity may be overcome by proof other than an adjudication of restoration and consequently a recovery and sanity may be shown after an adjudication of insanity where no adjudication of restoration to reason has been made. So holds the Supreme Court of Kansas, in the case of Lower vs. Schumacher, where it further maintains that, this being true, a contract or conveyance made by one adjudged a lunatic, but who is in fact sane when it is made, is valid, although no adjudication has been made that he has been restored to his right mind.

**Physician Entitled to Have Office Heated.**—A physician, with an office in his residence, contracted for a furnace to be put in to heat his house. The stipulation was that it would heat the lower rooms at 70 degrees Fahrenheit in zero weather, and the second floor 65 degrees. However, under the best of usage and attention, the furnace furnished not only lacked the capacity to produce heat sufficient to make the house comfortable, but left the temperature in the office so low that it was impossible for the physician to treat his patients in that part of the house, and the office was of but little use to him during the winter season. The evidence showed that the rental value of this office was $10. Under such circumstances, and as it holds that it was within the scope of the agreement that the office was to be heated by the furnace, the appellate division, fourth department, of the Supreme Court of New York holds, Russell vs. Corning Manufacturing Company, that the damages arising from this failure were fairly chargeable to the furnisher of the furnace.

**Cards as Evidence Against Abortionist.**—In Commonweal vs. Barrows, a prosecution for abortion, exception was taken to the admission in evidence of certain cards found in the defendant's trunk, in the room occupied by him; also, to allowing the district attorney to argue to the jury that the defendant, by the cards, advertised his business as that of an abortionist. But the Supreme Judicial Court of Massachusetts overrules the exceptions with the statement that it has no doubt that the cards were admissible in evidence, and that the district attorney was properly allowed to argue to the jury what their meaning was. It says that in such cases cards and circulars of a defendant have been held to be admissible in evidence if they tend to show that the defendant holds himself out as a person whose business it is to procure abortions. It is not to be expected that cards and circulars of this kind will state the fact in precise terms, or that their meaning will not be more or less disguised.

**Garbage Gathering.**—The Supreme Court of Michigan holds, in City of Grand Rapids vs. De Vries, that the gathering of garbage is not a trade or occupation in any proper sense, and such employment does not come under the doctrine in reference to monopolies, or in reference to legislation in restraint of trade. It is a matter in which the public agencies are authorized to pursue the best means to protect the public health. Wherefore it holds that the business of handling and carting garbage through the public streets of a city is a business which the municipality may regulate for the benefit of the public health. No person has the right to carry garbage or other refuse matter through the streets of a city in open vessels. It is not a creation of a monopoly when the city from year to year licenses one or more persons to cart such garbage from and out of the city, specifying how it shall be done.

**Dying Declarations in Abortion Cases.**—The Supreme Court of New Jersey holds, in the case of State vs. Meyer, that, upon an indictment framed under the provisions of section 119 of the crimes act of 1898, which charges the defendant with using an instrument upon the person of a pregnant woman, with intent to cause her miscarriage, and that the defendant's act caused the death of the woman, evidence of the dying declarations of the deceased is inadmissible. The reason given is that death is, in New Jersey, no longer in any case an essential element of the crime denounced, but is to be considered solely with respect to the punishment to be inflicted after conviction, which the court holds renders inadmissible the dying declarations.

**Calling One of Two Physicians as Witness.**—Although it has been held in New York state that, where two physicians together made an examination, and one was called to testify, the other should also be allowed to give his evidence, the appellate division, first department, of the Supreme Court of New York holds, that where two physicians have been employed in succession, but not at the same time, and never attended or examined the patient together, his calling one of them as a witness, as for example the last employed, is not a waiver of his privileges as to the other, especially if such other really never examined his injuries at all—only gave him medicine. It also holds, in Tracey vs. Metropolitan Street Railway Company, that where a physician who had been called in by the plaintiff was put upon the witness stand by the defendant, the plaintiff had a right to demand that it should be shown at the outset who had called in this physician, in order to raise the question whether he was disqualified for testifying against the plaintiff, and to determine the attitude he occupied.

**Cards as Evidence.**—An indictment charged the commencing at a certain time of the practice of medicine and surgery in the state of New Jersey, without license, by then and there prescribing for a certain named person a certain medicine, etc. A business card of the defendant, containing his name, with the title "Dr." prefixed, and advertising himself as pharmacist and chemist, and with having a free dispensary at his place of business, where registered physicians were in attendance daily to give medical and surgical advice free of charge, after being identified by him, on cross-examination, as having been put into circulation by him within two years previous to the date of the offense charged, was admitted in evidence over his objection. This, the Court of Errors and Appeals of New Jersey holds, Mayer vs. State, was not error. It holds that the card was admissible as a declaration of the defendant tending to prove that he had been engaged in carrying on the prohibited business, which was corroborative of the proof offered in support of the offense charged. Besides, the statute on which such indictment was based declared, among other things, that the use by a person of the title "Dr.," "Doctor," etc., or the exposure of a sign, circular, advertisement, or any other device or information indicating thereby the occupation of the person, should be considered prima facie evidence. Wherefore, the court holds that it was not erroneous for the trial judge to charge the jury to the effect that the card which the defendant gave to the prosecuting witness, along with the bottle of medicine, on which his name appeared as Dr. (naming him), was, under the act, prima facie evidence to the jury that he was practicing medicine, or holding himself out as practicing medicine, at that time.

**Dental Law Sustained.**—Section 5 of chapter 378, Maryland acts of 1896, reads: "Any person twenty-one years of age, who has graduated at, and holds a diploma from, a university or college authorized to grant diplomas in dental surgery by the laws of any one of the United States, and who is desirous of practicing dentistry in this state, may be examined by said board (state dental board of examiners) with reference to qualifications, and after passing an examination satisfactory to the board, his or her name, residence or place of business, shall be registered in a book kept for that purpose, and a certificate shall be issued to such person. Any graduate of a regular college of dentistry, may, at the discretion of the examining board, be registered without being subjected to an examination." This was attacked, in the case of State vs. Knowles, as containing the vulnerable points in the state dental law, rendering it invalid. It was argued that as the word "may" occurs twice in the section, and that as there could be no question that in the latter sentence it was employed in the usual and natural sense, the same sense must necessarily and unalterably be impressed upon its employment in the first sentence. Such being the case, the contention was that the board might, if it chose, refuse to examine one holding a diploma from a college or university authorized to grant diplomas in dental surgery, and could thus arbitrarily deny the right to practice dentistry in that state, to any one holding such diploma, however skilled in his profession, or however qualified to pass an examination. But the Court of Appeals of Maryland says that the law does not permit itself to be frightened out of its propriety by the hobglobin of inconsistency, and that it itself has no hesitation in holding that the only discretion conferred is to waive an examination when the applicant is a graduate of a regular college of dentistry, and that in all other cases covered by the act examinations must be granted when application is made in accordance with reasonable rules as to time and place. In other words, it construes the first "may" as shall" or "must," while it says that the latter "may" is required to be used in the permissive sense because it is expressly coupled with "discretion." Furthermore, it thinks the act does mean to distinguish, for the purpose of examinations, between "a college or university authorized to grant diplomas in dental surgery" and "a regular college of dentistry." In the former, it says, by way of justification, dentistry may be but an adjunct to the course, and there is no assurance of thoroughness of instruction and practical application, as must be presumed in a regular dental college, where the whole time of the students and instructors is given to the theory and practice of dental science. The principle underlying this discrimination has been recognized in numerous cases where the authority to determine what colleges are "reputable and in good standing" has been held not to be an arbitrary or unreasonable authority. With reference to the criticism that the language "may be examined with reference to qualifications" was so vague and indeterminate as to be fatal to the validity of the law, the court answers that it might well have been more specific, but that it is impossible to suppose that it refers to any other qualifications than those appropriate to and requisite for the practice of dentistry. And so the court holds the law constitutional, stating, too, that the same reasons which apply to the profession of medicine apply with equal force to the profession of dentistry, which is but a special branch of the medical profession.

**Proof of Sickness and Insanity.**—According to the Supreme Court of Alabama, it is competent for a non-expert witness to testify that a person is "sick," "diseased," or "has a fever"—these being statements of such facts as are perceptible to the senses, and not mere expressions of opinion. But it is not competent, the court says, in the case of Dominick vs. Randolph, for such witness to testify, if the evidence sought calls for an opinion instead of a statement of fact, until the witness shall have placed himself within the rule as to expert testimony. To state that a person is sick or diseased is a statement of a fact which does not necessarily involve professional knowledge or skill, but to state the particular kind of disease necessarily involves some degree of professional knowledge and skill, and consequently the expression of an opinion. To state that one has a fever is a statement of fact perceptible to the senses of the ordinary man, which it does not necessarily require the knowledge or skill of an expert to determine; but to say whether the patient is suffering with malarial or yellow fever would require the knowledge and skill of an expert, and necessarily the expression of an opinion. Moreover, the court draws the line in this case at allowing non-experts to testify as to a person having suffered with a stroke of paralysis. Indeed, it suggests that the propriety of excluding such testimony was well illustrated right in this case, where it thinks it quite probable that what the only expert witnesses offered described as rheumatism the non-expert witnesses supposed to be paralysis. Where insanity is a fact in issue, it holds that the testimony of non-experts may be admitted, where it is shown that the witness has had long and intimate acquaintance with the person in question—this long and intimate acquaintance in contradistinction to a casual acquaintance and occasional conversations and interviews—to enable the formation of a correct judgment as to the mental condition of such person. A mere speaking acquaintance, with occasional conversations, the most of them of very recent date, it insists, does not qualify a non-expert to testify upon the question of sanity or insanity. To test the sincerity of a non-expert witness who has brought himself within the rule qualifying him to testify with reference thereto and has testified to the insanity of the person in question, the court holds that he may be asked, upon cross-examination, whether such person was capable of making a deed at a certain time, although this calls for an opinion or conclusion. But the fact that a man made an improvident bargain; that he is generally unthrifty in his business or unsuccessful in one or more enterprises, the court does not consider of itself proves him to be a non compos mentis.

# Societies.

### COMING MEETINGS.

Oregon State Medical Society, Portland, June 20-27.

Second District Branch of the New York State Medical Association, Schenectady, N. Y., June 28.

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Rhode Island Medical Society.—The eighty-ninth annual meeting of this Society was held in Providence, June 7. Five new members were added.

Elkhart County Medical Society.—This Society met in Elkhart, Ind., June 6. H. O. Statler was elected president, and John C. Fleming, vice-president.

Saline County Medical Society.—At the recent meeting of this Society, held in Marshall, Mo., June 13, the following officers were elected: president, G. A. Richart, Blackburn; vice-presidents, B. C. Bradshan, Arrow Rock, and W. G. Fisher, Marshall; secretary, D. F. Bell, Marshall.

New Mexico Medical Society.—At the annual meeting of this Society, held in Santa Fe, June 7, the following officers were elected: president, J. H. Sloan, Santa Fe; first vice-president, J. W. Hope, Albuquerque; second vice-president, George C. Bryan, Alamo Gordo; third vice-president, J. A. Rolls, Watrous; secretary, J. Frank McConnell, Las Cruces; treasurer, G. W. Harrison, Albuquerque. Alamo Gordo was selected as the place of the next annual meeting.

New Jersey State Medical Society.—This Society held its 134th annual meeting in Atlantic City, June 5. The following officers were elected: president, William Pierson, Orange; first vice-president, J. D. McGill, Jersey City; second vice-president, E. L. B. Godfrey, Camden; third vice-president, Henry Mitchell, Asbury Park; secretary, William J. Chandler, South Orange; treasurer, Archibald Mercer, Newark. The next meeting will be held in Allenhurst.

Massachusetts Medical Society.—The 119th annual meeting of this Society was held in Boston, June 13. The board of councilors elected the following officers for 1900-1902: president, Frank W. Draper, Boston; vice-president, W. W. Eaton, Danvers; treasurer, E. M. Buckingham, Boston; corresponding secretary, C. W. Swan, Brookline; recording secretary, F. W. oss, Roxbury; librarian, Edwin H. Brigham, Brookline. The [illegible]al Shattuck lecture was delivered by Dr. William H. elch, of Johns Hopkins.

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## Associated Health Authorities and Sanitarians of Pennsylvania.

*Seventh annual meeting, Mechanicsburg, May 28.*

### SCHOOL HYGIENE.

Prof. J. A. Beitzel, principal of the public schools, spoke on this subject, saying that only recently has it dawned on the people that the trend of the educational forces is too exclusively in the direction of a single order of culture. Every energy has been bent toward the intellectual part, without thought as to the physical. A sound mind in a sound body has not inspired the administration of public school affairs. Laws of health are violated in improper buildings, improper heating, lighting, ventilation, and want of sanitary surroundings, and by taxing the eyes and the mental powers. He alluded to the great care of the ancients in regard to the body of the growing citizen, and said that school hygiene must ever be considered if we want healthy as well as cultured children. There must be proper sites for the building, good drainage, avoidance of bad air, the cesspool should not receive the school drainage; proper ventilation and heating should be secured for the health for the pupils, and overcrowding in the rooms should not be tolerated. All these cause tired nerves, headaches and mental exhaustion. Five hundred children assembled in one room for two hours produce carbonic acid gas equal to the solid charcoal or carbon in twenty pounds of coal. These would give off in that time, vapor equal to four gallons of water, this being laden with impurities from ill-ordered mouths, decaying teeth and the natural waste from the mucous linings of the air-passages. In addition, the skin is continually throwing off waste products even in the case of the cleanliest. Imagine the condition of a child who has not had a bath perhaps for six months; think of the exhalations from such bodies, from the dirty clothing, and the usual wraps in the cloak-room. What a soil for the development and propagation of scarlet fever, diphtheria, etc! Again, we have overheated school-rooms and the children are allowed to rush out into the cold corridors or yards, so it is not strange that quinsy, croup, bronchitis, etc., are prevalent.

To know what is the proper air-space for each occupant is vastly important and we have differences of opinion on this point. Dr. Chapin insists on 12 to 20 square feet of floor space and 200 or 250 cubic feet of air-space according to age and development; Dr. Newsholme maintains that 2000 cubic feet of pure air are required per hour for each pupil; the English educational department gives only 80 cubic feet as the minimum space, and 8 square feet of floor space; the New York Board of Education prescribes 70 cubic feet of air-space for the lower classes, and 80 for the higher. With all these views, however, one thing is obvious: we must remove the foul and furnish an abundant supply of fresh air and a liberal air-space, or *we do not provide for the health of the children.* The air must be changed without drafts, and superheated air must be guarded against, for not only is the air thus made less valuable, but it is too dry, and will abstract moisture from the skin and lungs, causing a feverish state. Proper lighting of the school-room is necessary, or the eyes will be injured, and here we need the sanitary expert and the architect. All teachers know the depressing effect of cloudy, sunless days, and a dull, dark room. The direction in which light enters the room is of supreme importance: when full in the face, it is fatal to eyesight; while light from behind throws the shadow of the body on the book, and from both sides throws a double set of shadows, but from the left and from overhead windows, it falls directly on the desk. Some claim that from each desk there should be visible a strip of sky at least 30 cm. wide, measured from the top of the window. It has been observed that there is a progressive tendency to myopia in school children, due to the nature of their work and the defective illumination, and that near-sightedness increases from the lower to the higher grades. The inference, from a number of observations, is that the children of those nationalities most commonly engaged in study and eye work have the greater proportion of myopic change, while those accustomed to outdoor life and resting their eyes largely on remote objects are generally free from this affection. Better lighted buildings show a less proportion of myopia, and observation shows that the ratio of children wearing spectacles is progressive, indicating that eye-strain is due to insufficient or excessive light, glaring and conflicting lights, that from the wrong direction, too long use of the eyes without change of focus to distant objects, too small type in print, reading from the blackboard at too great a distance, and bad position of the body assumed in the execution of the slant system of penmanship, causing spinal curvature as well as defective vision. Other phases of school hygiene of importance are improper seating, overcrowding, overwork, lack of exercise, too long sessions, nervous disorders, epidemics, and infection from books.

### HYGIENE IN THE RURAL SCHOOLS.

Dr. Benjamin Lee, secretary of the State Board of Health, said that fortunately for the health of school children, school directors have not hesitated to interpret the phrase "general supervision," in the law which assigns their powers and duties, in a very generous and liberal fashion. They have determined the number of schoolhouses, their size, comfort, ventilation, etc. While it will be recognized that every one of the above features of educational supervision has its bearing on school sanitation, yet in none does the protection of health appear as the direct object. But in section 110, this motive is recognized: "suspension is the separation of the pupil for a limited time from the school, it may be either for bad conduct or for sanitary measures." This may be done without calling the board to meet, and the teacher is thus made a medical inspector for the school. In some instances, we find a compulsory vaccination regulation, as in Philadelphia; but systematic medical inspection should be the rule. Decisions have been made by certain judges deciding positively as to the equity of this proceeding.

He referred to an act to provide for the restriction of communicable diseases, since issued as the Pennsylvania Sanitary Code. Schools were recognized as the great centers of infection for the propagation of disease, and this act is to raise every barrier against the spread of infectious diseases in every way. It applies to all schools, public, private, parochial, and Sunday. Decisions have been made that now settle the law. The legislature's last attempt was to encourage school boards to assume responsibility for the sanitary care of the children, by an act to empower the school directors of the several townships to exercise the powers of a health board for the township.

### THE RURAL DIRECTOR AS A HEALTH OFFICER.

**C. Herbert Obreiter**, Lancaster, gave some information in regard to his township, which is a small one with a population partly rural and partly urban. The school board organized as a board of health in the simplest way, as diphtheria was prevalent in the district and a few cases came within jurisdiction; no additional officers were elected; they required teachers as well as physicians to report cases of which they might learn, and by requiring the local director to placard houses which were infected, these remained quarantined until danger was passed. A fine of $10 was announced for breaking quarantine. This slightly increased the duties of the director, making him a sanitary officer, but made no new demands on the district's funds. The city board furnished formaldehyde for fumigation, at cost; antitoxin was needed by one poor family, and this was furnished from the school funds, and the action was not questioned by the auditors. All children from infected houses were dismissed, and all articles handled by these patients in school cremated. No opposition was encountered, but commendation was given, for the people recognized that it was their protection that was being considered. He thinks the legislature did well in reposing this trust in the school directors, as no class of men are less influenced by improper motives, or are more earnest in the discharge of duty. This act confers unconditional power and leaves no choice to reject it entirely. Its greatest defect is the absence of a penal clause; all know fines are often futile, and this is the weakest point. Only one remedy is suggested—that is, making the appointee a special sanitary officer.

The rural director in his new capacity is invested with the widest power, undefined by any court, and he may abate a nuisance, even invade private property to do this, without contravening the owners' constitutional rights in so doing. The act is simply a necessary exercise of police power, and he may isolate, and control the liberty of afflicted persons, virtually excluding them from all communication with their fellow beings. As a health officer he can not be sued in tort, and he is not liable for mere errors of judgment, so long as he acts within his jurisdiction.

### MEDICAL INSPECTION IN SCHOOLS.

**Miss Dora Keen**, secretary of the Public Education Association, said that classes should not have more than a maximum enrollment of forty-five to a teacher, as more cause impure air, crowding of desks and lack of individual attention by the teacher. She remarked also that standing movements are invaluable in the training of a child, and that these should be a part of the daily program, and the play instinct should be utilized in games. Medical inspection has done very much to reduce the number of detentions by sickness. Daily visits should be made, as very many are found suffering with nose, throat, or ear affections, sore eyes and defective vision. In one instance the parents were asked to meet the inspector and nearly five hundred came,

### BENEFITS OF SANITARY WORK.

**Dr. A. C. Abbott**, president of the State Board of Health and bacteriologist of the city of Philadelphia, made the annual address and spoke of the benefits obtained from sanitary work; he considered in detail filtration of bad water and bacteriologic examinations for the profession.

### MILK-SUPPLY.

**M. C. Lippert**, Phœnixville, read a paper on "What Can be Done for the Protection of the Public From the Danger of the Dairy?" He spoke of the influence of milk as an article of diet on the health and mortality of children and infants. He said that lack of proper supervision and inspection by the state is responsible to a great extent for unsanitary methods in the dairy and the sale of milk from unhealthy or diseased cows; and that while we have a dairy and food commissioner, no provision is made by law for dairy inspection. The State Live Stock Sanitary Board is doing efficient work for the eradication of tuberculosis among cattle and other contagious disease also, but its work, owing to the vastness of the field, is necessarily limited to the inspection of animals on application of owners of dairy herds, and they have nothing to do with dairy inspection proper. The legislature should enlarge the duties of the dairy and food commissioner, by making systematic inspection of dairies and dairy herds obligatory throughout the state, and providing the necessary means and assistance by trained veterinarians. The legislature should further enact a general law, making a standard for all milk and providing for the prevention of adulteration and sale of impure milk, and investing local boards of health with full powers to inspect milk as well as dairies, and require certificates of inspection in the case of all milk sold within their jurisdiction.

### NEED OF HEALTH SUPERVISION IN TOWNSHIPS.

**Dr. Robert Maison**, county medical inspector, discussed the various steps taken by the State Board of Health and its friends to give local health protection throughout the state. The efforts resulted in establishing boards of health in cities of the third class and boroughs, and finally school boards in townships are authorized to assume the functions of a health board. He claimed that borough health boards in the smaller villages are not efficient, because of local antagonism, the dearth of proper material for membership, the personal element injected into every effort to abate nuisances, the lack of interest among the members themselves, the deficiency in hygienic knowledge and the constant changes in the personnel of the boards. He argued from this that to establish boards in townships would be inadvisable from the same reasons that now render those of the boroughs of little value, and that the sparsity of population would make township boards of much less use. He spoke of a borough where 4 per cent. of the population suffered from diphtheria last winter, and the local board was afraid to abate nuisances caused by a manufacturing firm giving employment to the majority of the inhabitants, for fear of reprisals. He advocates legislation providing for a county health officer with deputies in each township, in order that all cases of contagious disease may be promptly quarantined and epidemics thus avoided. He said that such a bill would pass if the members of the legislature were allowed to suggest the appointees for the deputy health officers, because no bill, however meritorious, can be passed unless the members of the legislature receive some pecuniary or political benefit through it.

### DANGER THAT ARISES FROM THE LACK OF RURAL SANITATION.

**Dr. H. B. Bashore**, West Fairview, said that in many cases the large cities are well protected from preventable diseases, while little is done for the rural districts, yet it is a pressing need for the welfare of the cities as much as for the districts themselves. The fact is being rapidly realized that it is more healthy in the average large city than in the country, because in the latter place, for many years filth has accumulated, and wells have been fouled; this in turn causes pollution of the water-supplies of the cities. Typhoid fever is carried from such a place, which has been fouled by the admission of the germ from the cesspool, to the well. This in turn is carried to the larger supply, and it is difficult to make the people understand that a well which has given water for so many years without bad results has now become dangerous. Again, the milk-supply to the city may come from a place where the old well is used to furnish water to the cows, and thus the milk be dangerous. Workmen engaged in building roads, etc., accumulate filth in their camps, ride in the crowded cars, and carry scarlet fever from their own families to others. Diphtheria is continually carried in this way, by women going out shopping from homes where it prevails. No public funeral is allowed in certain cases, yet the friends meet at the house and go from it, with garments loaded with germs, to use the cars, both steam and trolley, and thus spread the disease. Swamps are a means for the production of disease, but no one realizes this danger; and while rural hygiene is thus neglected, in spite of the great work in cities, we must expect that disease will prevail. We must demand health officers for the country.

### EPIDEMIC CEREBROSPINAL MENINGITIS.

**Dr. D. R. McCormick**, Lancaster, read a paper on this subject, in which he said that the first case reported this year was on March 15, the last on June 21; total 118; mortality, 67 per cent. During that time 103 premises were infected, 12 of which had more than one case. Lancaster has a population of 45,000; no cases occurred among the 700 Russian Jews; 1500 negroes, or 100 Italians. Though unsanitary conditions were found in four-fifths of the infected homes, few could be called very bad, though poor ventilation, slight defects in plumbing, drainage, filthy gutters, and proximity to dumps were common. Personal habits were good and there was no overcrowding. It attacked all classes, but few were among the very wealthy or very poor, and no section of the city was exempt. Occupation was not a factor, nor was age. The attack began in the spring, after a severe winter, yet it reached it height in April, during a period of dry warm weather. Contrary to expectations, it declined rapidly in May, and by June had almost disappeared. Its malignancy was shown, not only by the mortality, but by the rapidity of the occurrence of death. After the invasion 60 deaths occurred within five days, and 46 in less than forty-eight hours. No infection was shown nor any connection between cases, the first two being two miles apart. How it was introduced has not been discovered. Sanitarily, Lancaster is elevated, well-sewered, well-drained, has no tenements, but a small foreign population, is free from overcrowding, nuisances are rare and sanitary laws enforced. Aside from its water-supply, the city should not have proved a good field for conditions usually believed to be factors in this disease. Until March no special attention was paid to the disease, save to advise that caution be used by undertakers and families. Near the end of that month, the sudden death of a young man was reported, death occurring in twelve hours after the onset. Inspection was made, a private funeral ordered, and the body interred within thirty-six hours. At a special meeting of the Board, the citizens were urged to a strict enforcement of sanitary discipline, and not much more notice was taken. However, after a correspondence with other boards they unanimously declared the disease contagious, placarded the houses, and enforced all rules as to private funerals, etc. The replies from health boards and others showed a marked diversity as to whether or not the disease was contagious or infectious, etc. A careful study of the epidemic shows no apparent source of contagion; as only isolated cases occurred, the disease was not confined to any locality, contact did not cause the disease, and it appeared simultaneously in various places widely separated. Its contagious nature was shown in the fact that there were twelve places where more than one case occurred; that persons in attendance in three cases took the disease; that cold and exposure did not prove in any case a factor, and that in one instance the disease appeared to have been carried by another person who remained immune.

### THEORY AND PRACTICE OF VACCINATION AND PRODUCTION OF BOVINE VIRUS.

**Dr. W. F. Elgin**, Glenoldden, explained the nature of immunity, whether natural or artificial; how vaccination prevents smallpox, and antitoxin, diphtheria. He also explained that this latter is not a poison, how it is produced and how it acts to make the person immune to the disease. He alluded to the various forms of disease germs and the plan by which they are rendered innocuous. He gave in detail the value of vaccination, as shown by statistics of the German army, etc., and the earnest belief of all civilized people in the certainty of thus stamping out the smallpox, by constant vaccination, of infants, revaccination at puberty, and during an epidemic; and the necessity of never giving a certificate that a person has been vaccinated unless from some positive data, the scar not always being reliable, as in so many instances this may not be from a true vaccination. He especially alluded to the great care to be taken in performing this little operation, the cleansing of the point of insertion, the use of clean sterilized instruments, and too much effort to make a big vaccination, for three small even points protect as well as several, and produce less annoyance by the sore produced. He showed how the glycerinized virus has been successful in a large number of cases over the old method of using scabs, points, etc.

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## Fourth District Branch, New York State Medical Association.

*Sixteenth Annual Meeting, Buffalo, May 8, 1900.*

*(Concluded from p. 1498.)*

### PRESENT STATUS OF JONNESCO'S OPERATION.

**Dr. M. Hartwig** read a paper on this subject. It will appear in The Journal.

### CHRONIC INTESTINAL ADHESIONS.

**Dr. Charles E. Congdon** read a paper on this subject, and reported four cases, some of which had required two or three abdominal sections to relieve the persistently recurrent adhesions of the bowel.

**Dr. Frederick Holme Wiggin**, New York City, said that when he began to do abdominal surgery one of the first patients, who recovered from the immediate operation, died a year later from intestinal obstruction. At post-mortem the condition found to be present was so much worse than when he operated that he was convinced that the surgical technique in vogue at that time must be faulty. He noticed before long that where he opened the abdominal cavity and found a certain quantity of fluid there had been no adhesions. It was not long before he realized that intestinal obstruction following these abdominal operations was one of the greatest dangers with which to contend. Knowing that Halsted had found that saline solution did not irritate the contents of the peritoneal cavity, as was the case with ordinary water, he tried the plan of leaving some of the solution in the abdominal cavity, thus imitating Nature's method. He adopted this technique in 1891 or 1892, and soon noted with pleasure that these troublesome cases of intestinal adhesions were becoming less and less frequent until now he has no trouble with them. The accepted technique is to wash out the abdominal contents with the saline solution, being careful not to wipe off the parts, as this tends to form adhesions. He is in the habit of placing most of the stitches in the peritoneum, but not tightening them at this stage. As soon as the water comes away clear, he leaves the cavity full of saline solution, and closes the wound. By experimentation on dogs, he has found that the abdominal viscera can be subjected to considerable traumatism without giving rise to intestinal adhesions, provided this technique is observed.

**Dr. E. D. Ferguson**, Troy, said that so far as he knew he had not a single case of intestinal adhesions following the opening of the abdomen, though possibly others might have encountered it after the patient left his hands. This immunity from intestinal adhesions had not been the result of any special technique; however, there should be as little active inflammation in the abdominal cavity as possible at the time of the operation. There are three elements necessary to success: 1, the thoroughness with which the adhesions are separated; 2, the thoroughness with which all denudations, from stripping of the peritoneum, are repaired, and 3, the putting into the abdominal caity of a certain quantity of saline solution, that quantity to be gauged by its capacity. He recalled a case, seen in consultation, in which the second or third operation for intestinal adhesions was to be done. The operator was about to dust the parts with aristol, at the close of this operation, as he had done in the previous ones. At this point, he advised him to desist, and to substitute for the aristol the filling of the peritoneal cavity with saline solution. He did so, and the woman made an excellent recovery, and has been troubled no more by intestinal adhesions.

**DR. M. W. TOWNSEND**, Bergen, said that he does three things in order to prevent adhesions, viz., 1, leaves no raw peritoneal surfaces; 2, leaves the abdominal cavity full of saline solution; 3, opens the bowels on the third day with a cathartic, and keeps up the catharsis. He is most careful also to avoid the administration of morphin.

**DR. A. L. BENEDICT**, Buffalo, spoke of the intestinal adhesions from a medical standpoint, and referred to a case in which there was only a history of pain, constipation and a previous operation, so that the diagnosis of intestinal adhesions rested only on these three points. In this instance, the diagnosis was confirmed by autopsy, but not infrequently these cases are wrongly diagnosed as appendicitis.

**DR. E. J. MEYER** spoke of cases of fulminating appendicitis in which it is necessary to insert drainage-tubes. He sees no way of preventing the formation of adhesions in cases of extensive peritonitis where drainage is required. Here one can not make use of the very valuable suggestion to fill the cavity with saline solution.

**DR. M. HARTWIG** said that in 1877 he met with a very severe case of intestinal adhesions, all of the coils of the bowel being matted together. He separated what adhesions he could and made an artificial anus. The result not being very satisfactory, he took the patient to a no less eminent surgeon than Volkmann, who, after keeping the case under observation for a few days, declared that nothing more could be done. This he mentioned to show the great strides which surgery has made.

**DR. CHAS. E. CONGDON**, in closing, said that for a long time he made it a practice to fill the abdominal cavity with saline solution with the object of preventing these intestinal adhesions, but that he failed in accomplishing this purpose. In his later and more successful cases, he has used as little fluid as possible, and employed aristol, which has seemed to prevent the formation of these dreaded adhesions. He cited a case of severe gangrenous appendicitis which he operated on, and in which at the operation, done subsequently for another purpose, he found absolutely no intestinal adhesions.

### HEPATIC SCLEROSIS IN NON-ALCOHOLICS.

**DR. A. L. BENEDICT**, Buffalo, read a paper on this subject. He said that the view is now generally accepted that there is a connective hypertrophy and a contraction of the liver. A study of the histories of 250 cases reveals the fact that 37 out of this number showed unmistakable and often extreme atrophic sclerosis. In only 4 cases has the diagnosis been made of hypertrophy, and only 1 of these has been a markedly alcoholic one. Those who lay great stress on alcoholism usually base their opinion on the statistics collected from hospitals where very many of the patients are alcoholics. Of the 54 cases of hepatic sclerosis reported in this paper, the number of total abstainers was 9, and of hard drinkers, 4, while the remainder were practically total abstainers. He believes that the poison, which irritated the liver, is often not alcohol, but acids and their organic compounds, produced by micro-organisms, the yeasts or bacteria, in the stomach or intestine. One experimenter had produced similar lesions in animals by the injection of indol, phenol, and similar substances, and C. A. Herter's experiments point in the same direction. It should be remembered also that hepatic sclerosis in the human being is a very slow process. He is at present engaged in a study of the length of time requisite for the development of such pathologic changes, and hopes in the course of ten or fifteen years to present some scientific conclusions based on an extended study of this subject.

### INJURIES OF TENDONS AND THEIR TREATMENT.

**DR. WILLIAM M. BEMUS**, Jamestown, considered this subject. The first case reported was one in which a young man while skating had had the left skate suddenly checked in its progress. This resulted in throwing the body forward, and putting the ankle suddenly in a forced extension, and in throwing the tendon out of its bed behind the malleolus. A second case of this kind was also narrated, in which dislocation of the tendon had been produced by sudden forced extension of the ankle. Manipulation seldom fails to reduce the dislocation, and it should then be fastened in place by a pad and roller bandage. The accident is usually accompanied by pain, tenderness, disturbance of function and local redness. The diagnosis may be uncertain if the tendon is deep-seated or covered by fat, or is obscured by much swelling.

### ECTOPIC PREGNANCY WITH SUBPERITONEAL RUPTURE.

**DR. C. C. FREDERICK**, Buffalo, reported three cases, in which there had been repeated hemorrhages, with consequent increase of growth of the hematoma until large tumors had developed. The first patient was a woman who had been ailing for about a year with abdominal pain, coming on in paroxysms. On abdominal section he found a tumor composed of concentric layers of blod clots, and finally a lithopedion, or fetus of about four months' development. Beneath the amniotic sac was a freshly formed clot. He drained the sac through Douglas' pouch and the patient made a good recovery. The second was a woman having a tumor as large as a pregnancy of seven months. She had suffered constantly. On opening the abdomen he found a similar mass of blood clots, and a fetus of about five months' development. She made a slow but good recovery. A third case presented a tumor extending very nearly to the ensiform cartilage. In this instance he turned out an ordinary basinful of clots and a six months' fetus. As the descending portion of the colon and the cecum formed a part of the sac, he acidentally tore through the colon. He then effected an anastomosis by means of a Murphy button. She did well for four or five days, but then developed a rapid pulse and vomiting. On reopening the abdominal cavity, he found that the button was all right, but the sac had sloughed and was leaking into the peritoneal cavity. The woman hung between life and death for two days, but eventually made a complete recovery. In none of these cases was he able to elicit any history of ectopic gestation, and the tumors had been supposed to be new growths. In cases in which the placenta was well developed he effected hemostasis by the use of purse-string sutures.

**DR. E. D. FERGUSON** exhibited a forceps for lifting up the uterus in ventral suspension. He said that in very obese patients, or in those in whom the diaphragm is making very active movements, it is difficult to insert the sutures in the uterus, and it was to facilitate this procedure that this instrument was devised. He also presented a very large director for use in vaginal hysterectomy, by the aid of which the broad ligament can be readily brought into view and controlled.

### TREATMENT OF TYPHOID FEVER.

**DR. J. H. SACKRIDER**, East Randolph, presented a paper on this subject. It will appear in THE JOURNAL.

**DR. WILLIAM M. BEMUS** said that he employs this method of treatment in his own practice, and with considerable success. He uses high enemata of cool water in which is dissolved a little sulphocarbolate of soda or of zinc; and also gives one of these sulphocarbolates by the mouth. This treatment he regards as an ideal one for typhoid fever. Although several authors now recommend giving solid food quite early, he is personally afraid of following such advice.

### COMMON BUT GENERALLY UNRECOGNIZED SYMPTOMS OF EYE-STRAIN.

**DR. ELMER G. STARR**, of Buffalo, read a paper on this subject, and it will appear in THE JOURNAL.

**DR. A. A. HUBBELL** said he agreed with most of the statements made by Dr. Starr, but while admitting that nervousness, irritability, headache, vertigo and indigestion often originate in eye-strain, he would remind those present that these symptoms may arise from other causes.

**DR. F. W. ABBOTT**, Buffalo, said that if there is a marked refractive error, by correcting this, relief will be secured. It is, however, in cases of slight refractive error, where it is necessary to strain the accommodative apparatus continually in order to secure good vision, that eye-strain is apt to develop.

### PAROVARIAN CYST.

**DR. HERMAN E. HAYD** exhibited a large parovarian cyst that he had removed four days previously from a woman, forty-five years of age, who had presented all the useful evidences of ascites. Owing to her good nutrition he felt sure that there could be no tuberculosis, and no cardiac or renal trouble, and he therefore made a diagnosis of parovarian or ovarian cyst. The tumor weighed about sixty pounds, and contained about twenty-eight quarts of fluid. On the other side was a small but perfect parovarian cyst.

### HEMORRHAGE AFTER CONFINEMENT, AND ITS TREATMENT.

**Dr. Herman E. Hayd**, Buffalo, read a paper on this subject. It will be printed in The Journal.

### RUPTURE OF SYMPHYSIS PUBIS DURING PARTURITION.

**Dr. George A. Himmelsbach** read a paper on this topic. He said that this accident is a rare occurrence, and is said to be dependent on a previous softening of the joint; and also that it is probable that rupture of this joint occurs much more frequently in forceps deliveries than is generally supposed. Rupture of the right sacroiliac articulation also occurs, but it is rare for both sacroiliac articulations to rupture at the same time. In his own case, there has been no accompanying crack or snap, or the occurrence of sudden pain to indicate that it has taken place. Under such circumstances the occurrence of this lesion is made apparent when the patient gets out of bed, because of her peculiar gait. Union of the joint sometimes takes place in ten or fifteen days, but often several weeks are required. When this accident is known to have occurred, it is important to redouble antiseptic and aseptic precautions, as Duhrssen has reported thirty-three cases in which there has been suppuration of the joint. The best treatment consists in the application of a broad binder, extending from below the breasts to one-third down the thigh. In his own case it was nearly two months before the patient could walk, and then she could do so only with difficulty. When seen five months later her gait was even, but she still complained of pain in the region of the symphysis and of the right sacroiliac synchondrosis.

### CASE OF PERFORATING GASTRIC ULCER.

**Dr. Allen A. Jones** reported this case. His paper will appear in The Journal.

**Dr. De Lancey Rochester** expressed surprise that this ulcer existed without the presence of blood in the stomach washings, or in the vomited matter, and with the normal amount of free hydrochloric acid. He said that the case was interesting, and most unusual.

**Dr. William H. Thornton** said that having been called to a severe case of hematemesis from gastric ulcer directly after a medical meeting in which a case had been reported of hemor[illegible] from the bladder checked by an injection of a solution [illegible]tipyrin, it occurred to him that it would be desirable to [illegible] method for the control of gastric hemorrhage. He [illegible]ly gave a dose of ten grains, and repeated it immedi[illegible] after an attack of vomiting. The result in this case, and [illegible] others, was very satisfactory.

### THE NEW CHARTER OF THE STATE MEDICAL ASSOCIATION.

**Dr. E. D. Ferguson**, president of the New York State Medical Association, called the attention of the Branch to the fact that the State Association has been recently granted a charter, under which it will probably be found expedient to organize subordinate county associations. He said that the State Association is the only bond between the medical profession of the State of New York and the American Medical Association. The lines have been drawing more and more closely for a number of years past, and delegateship to, and registration in, the American Medical Association are now accorded only to those who are in direct affiliation with that association.

**Dr. Frederick Holme Wiggin**, New York City, having been called on by the President for remarks and suggestions concerning the work of the State Association, spoke of the charter and the matter of reorganization. He said that while the tendency of modern times is for every line of business to organize, the medical profession has afforded a notable exception to this rule regarding co-operation. He first became impressed with the evil of this lack of co-operation by the attitude of the Legislature toward the medical profession in the matter of the abuse of medical charity. While a resident of Connecticut he was a member of the Connecticut Medical Society, and has been impressed with the superiority of their organization. Membership in the county organization brought membership in the State Society, and one set of dues was paid. The county associations sent delegates in proportion of one to ten to the State Society, and it is probable that this will be the plan of organization in the reconstituted New York State Medical Association.

In regard to the publication of the Medical Directory, he explained that it should be controlled by the medical profession in order to keep out objectionable advertisements, because it is important to every physician to have full information regarding himself in the directory, and to have the confidence of all it must be understood that this information is unbiased and trustworthy. In reference to the object of the Association, he said that it is the intention to make the new New York State Medical Association something more than a dignified scientific body, by taking up the matter of protecting physicians in the state against malpractice suits. It is not the purpose to form a trades' union, or to fight the public, but simply to stand together for the right.

By a unanimous vote the Fourth Branch decided to become a branch association of the newly organized State Association, and steps were taken to organize in the near future a subordinate county association in Erie County.

## Cleveland Medical Society.

*May 11, 1900.*

First Vice-President, Dr. J. B. McGee, in the Chair.

This meeting was devoted to the exhibition of pathologic specimens.

### PATHOLOGIC SPECIMENS.

**Dr. C. A. Hamann** presented some. The first was an inferior maxilla on which, on the lingual surface, opposite the first bicuspid, there was on each side an exostosis. Being symmetric they possess possibly some morphologic significance. He was unable to say what they were. He also presented a specimen of humerus showing the supracondyloid process. The brachial artery, together with the median nerve, passes under it. It is the representative of a foramen present in some of the lower animals.

He showed a biceps muscle with four heads, three of which arise from the coracoid process, and presented another biceps which was double throughout its entire extent. He also exhibited a specimen of congenital dilation of the ileum at the position of the ileocecal valve.

A rare anomaly of the aorta was presented. In this specimen the right subclavian artery arises from the arch of the aorta beyond the origin of the left and passes behind the trachea and esophagus. This anomaly is due to the persistence of the right aorta.

He showed several mounted specimens of vermiform appendices and pointed out the fact that they demonstrate that it is quite impossible to feel the normal appendix by palpation. One appendix is large, curved, and has a mesentery extending to its tip, another is concealed in the postcecal fossa, and another adherent to the cecum through its entire extent, but the adhesions were normal and not pathologic.

**Dr. W. T. Howard** presented the specimen of a heart and aorta from a man who was admitted to the Lakeside Hospital complaining of shortness of breath, indigestion and edema of his extremities. The clinical diagnosis was arteriosclerosis with chronic nephritis with cardiac hypertrophy. The next day the man was found dead in bed. A large amount of blood and some clots were found in the pericardium, and 4 cm. above the aortic valve there was a rupture of the intima and media, and there was a dissecting aneurysm running the entire length of the aorta. How long this had existed could not be said, nor could the cause of death be determined.

**Dr. R. F. Weir** showed two specimens of pelvic tumor in which twisting of the pedicle had resulted in infarction of the tumor. He also showed specimens of papillocystomata of the ovary, which he thought were formed from the germinal epithelium.

**Dr. W. T. Howard** said that in most cases of cystoma the follicle is the point of origin. He was very skeptical about the adhesions often found about the ovary and very greatly doubted whether they did any real damage.

Dr. R. F. Weir also presented a specimen of cancer of the cervix and one of uterine fibroid associated with fibroid of the ovary. In closing, he noted that physicians have been very much impressed with the fact that in practically every instance of pelvic inflammatory disease, from whatever cause, they found in the blood large numbers of eosinophiles. Their significance has not yet been determined.

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## National Confederation of State Medical Examining and Licensing Boards.

*Tenth annual meeting, Atlantic City, N. J., June 4, 1900.*

### WORK ACCOMPLISHED UNDER THE KENTUCKY LAW.

Dr. J. N. McCormick, M.D., Bowling Green, Ky., used this as the subject of his presidential address, and said that to be really profitable, annual conferences like this should partake largely of the nature of experience meetings, where members may recount in sorrow to sympathetic ears insurmountable difficulties met or defeat suffered in their respective states, or, amid applause and congratulation, announce and explain progress in new legislation or court decisions, or growth in public sentiment in favor of scientific medicine as against the various forms of quackery and imposture. They might also be termed mile-stones on the highway of our advancement, about which representatives of all the states may gather temporarily to compare notes, and then return to the position each has really attained in the march, a few in the vanguard, with quackery under control, the majority, composing the main column, where charlatans and scientific physicians have equal legal recognition, and a considerable rear guard and straggling force, where charlatans and fads are exalted and the scientific physician is in constant danger from the undertow.

"I have been not a little amused in reading the self-complacent publications upon medical requirements issued by the Board of Regents of the State of New York, under whose benign authority quackery in all of its grosser forms flaunts itself with an effrontery seldom seen elsewhere, with the *Bulletin of the American Academy of Medicine*, which constitutes our medical aristocracy, or professional 'four hundred,' most of whose members come from states where an honest Doctor, if he behaves himself, stands nearly as well before the law as a 'Christian scientist' or an osteopath—I say I have been not a little amused to find that the latest revised, improved and duly verified editions of these publications put their own quack-ridden and fadridden states in classes 'A' and 'B,' chiefly 'A' or 'AA,' as to requirements, while Kentucky, within whose borders an itinerant or advertising doctor of any kind has not dared to show his face for years, is put down in class 'C', and away down at the bottom at that.

"Our law is very like those of most of the other states, and the good results attained have come from the method, or rather the methods, of administering it. The law leaves much to the discretion of the Board, which means that it is flexible and easily adapted to varying class and individual conditions. The preamble to the law sets forth prominently that its purpose is to protect the people from ignorant and unscrupulous charlatans, and it is administered with this sole aim in view. Accepting the opinion of the American Medical College Association that it takes four years of school training to make a safe doctor out of a properly educated boy, we have adopted this standard, and all schools whose graduates are to practice in Kentucky are required to conform to it. We aided cheerfully in forcing this measure of reform upon our own schools, to their great hardship and serious financial loss, and we propose to hew to this line, let the chips and angry remonstrances come from and fall where they may.

"In addition, recognizing the diploma as being only the applicant's pedigree, we investigate the qualities and character of the individual. We want not only smart fellows who can pass a technical examination, but above this, and, as we conceive, more important than even this, our law contemplates and provides for honest men, who will deal fairly and squarely with their patients. As we understand it the State has no authority to inquire as to names or methods of practice, or whether large or small doses, or no doses at all shall be used. But it can require, it should require, and we do require, whether a doctor calls himself an allopath, homeopath, osteopath, eclectic, or belongs to "the no-name series," not only that he be competent in his fundamental training, but that he shall be honest in his business methods.

"Nor does our supervision stop with the issuance of a license. Each applicant has sworn that he will practice honest and legitimate medicine—that he will not become an itinerant or an advertiser. Then we have a medical referee in each county as a shepherd for his flock. A deviation from honest methods is promptly reported and brings a letter of kindly admonition from the central office, which nearly always has the desired effect. All this is done quietly, kindly, in the interest of the individual as well as the profession and public, and to this constant attention to personal elements and seemingly unimportant details we attribute much of the effectiveness of our law.

"As a result of our established reputation for fair dealing with all classes and systems of medicine, every doctor in the state, regular, homeopathic and eclectic, worthy of the name, as well as most of our intelligent people and leading newspapers, are friends and supporters of our law. If adverse legislation is proposed they fly to its defense they importune their representatives and make their lives a burden until they promise to stand by the right. and then they see that they never get back as members if they fail to keep their promise. In a word, our law, being founded upon the right of the state to require training and honesty in those who desire to enter this life-saving profession, and being patiently and untiringly executed with an eye to these results alone, is a practical success in which the profession feels a justifiable pride.

"Much has been said at meetings and in the journals about the importance of reciprocity between the various states in the matter of medical license. From what has already been said you can readily understand why we can not seriously consider such propositions from other states under present conditions. From Maine to California, from the lakes to the Gulf, in all the centers of population, we find the 'Copelands,' the 'K. & K.'s' *et id genus omne*, who were run out of our state after tedious litigation many years ago. We do not want them back, and, therefore, can not afford to recognize state certificates from Pennsylvania, New York, Illinois, or other states which give them the right to practice, and where they flourish like the green bay tree.

"We still look upon our work as in the experimental stage. It took four hundred years of constant struggle for our English ancestors and brethren to reach their present standards, which are yet far from ideal. For eighteen years after the enactment of our first law we made little more progress than did Sisyphus with his rock. All that we claim now is that we have laid broad foundations upon which those who come after us may safely build."

### CO-OPERATION OF THE MEDICAL PROFESSION WITH THE NATIONAL CONFEDERATION OF STATE MEDICAL EXAMINING AND LICENSING BOARDS IN ESTABLISHING INTERSTATE RECIPROCITY FOR THE LICENSE TO PRACTICE MEDICINE.

Dr. Emil Amberg, Detroit, Mich., advanced the idea that if a majority of the members of the medical profession of the United States should unite in demanding reciprocity, it would be granted. In order to obtain true reciprocity it is necessary to demand greater uniformity in medical education. This can be accomplished only by reducing the number of medical schools. Private institutions of this nature are a mistake, and medical education should be under the care of the government. The lay press of the country can be depended on to second improvements in medical laws, if they are convinced of their real utility for the general public. This was the experience in Michigan when, in the absence of any law for the regulation of medical practice, the lay press took up the battle of the regular practitioners for the protection of the people from quacks. Experience teaches that it requires great efforts on the part of the medical profession to educate the lawmakers and the public, in order to convince them of the usefulness and necessity of changes. We are just entering on the hygienic century. America will take her proper place in the great advance in medicine that is about to come only if her practitioners really possess the merit they are supposed to have.

Dr. **Charles A. Groves**, East Orange, N. J., followed with a paper entitled, "Associate Medical Examining Boards." The author spoke in favor of associate as opposed to separate examining boards, on the ground of simplicity, effectiveness, and general adaptability to the needs of the work.

Dr. **Henry Beates, Jr.**, Philadelphia, gave a brief review of the medical curriculum of the United States with special reference to its defects, and indicated modifications, as demonstrated by the state medical examinations of Pennslyania. What is essential is, first, an adequate curriculum, properly administered. Secondly, only such students should be permitted to matriculate as are beyond all question possessed of proper preparatory education. These essentials will exist only when the medical college reigns supreme as the legitimate center of medical culture and is equipped with properly trained professors, perfected laboratories with apparatus, and competent instructors, who are men of merit, and when the public is educated to the point of being able to recognize real worth, and refuses to any longer tolerate the gilded farce which has determined the existence of medical legislation.

### RECIPROCITY IN MEDICAL UNIFORMITY.

Dr. **W. A. Spurgeon**, Muncie, Ind., offered a resolution providing for a committee to suggest ways and means for the establishment of interstate reciprocity in licensure for the practice of medicine and for uniformity in medical education.

In the discussion, Dr. **William Warren Potter**, Buffalo, N. Y., said that the Confederation is the only one of the many organizations, the members of which were officially recognized by state governments. It is important not to derogate from their official positions. The question of advising legislatures as to enacting reciprocity laws should come last. Uniformity in medical education is at present the one thing to be sought. When this is secured, reciprocity will naturally follow. Uniformity in medical education can be advanced by the Confederation of Examining Boards and that of the medical colleges working together. Conference is needed, not hasty action. The motto should therefore be *"festina lente."*

Dr. **James A. Egan**, Springfield, Ill., thinks it is useless to hope for uniformity in legislation. It is impossible to convince legislatures of the crying needs of their own state. A law to regulate the practice of medicine comes back from the legislature so mutilated and amended as to be scarcely recognizable. Under the existing laws much can be done toward remedying the present situation. He stated that the Illinois State Board of Health has passed a resolution to accept the licenses of other states that comply with their regulations, and in so doing the Attorney-General says that the Board has not gone beyond its powers. Other State Boards can follow this example. The courts can be depended on to favor public utility in the interpretation of the law, and reciprocity is distinctly of this character.

Dr. **E. B. Harvey**, Boston, said that it is useless to hope that any committee can influence legislatures to give up their individuality. States will not accept the standards of other states. There is often no reciprocity even in the public schools of different cities of the same state. It is a chimera to look for reciprocity. Uniformity in medical legislation should be the watchword.

Dr. **J. N. McCormack**, Bowling Green, Ky., said that the discussion on reciprocity reminded him of a country inn with screens to keep out flies, which really kept them in. Many states seemed willing to have reciprocity so as to get rid of their surplus medical men. Each state should keep down quackery by stringent laws. What is needed most at this time is a committee that will report and weed out "paper" colleges. Information as to the status of such colleges would be most welcome to medical examining boards and be very helpful.

The following committee on interstate reciprocity and uniform medical legislation was appointed: Dr. W. A. Spurgeon, Muncie, Ind., Chairman; Dr. Gardner T. Swarts, Providence, R. I.; Dr. Emil Amberg, Detroit, Mich., Secretary; Dr. Augustus Korndoerfer, Philadelphia, and Dr. E. B. Harvey, Boston.

Dr. **N. R. Coleman**, of Columbus, Ohio, discussed the matter of the steps to be taken to establish a uniform standard of preliminary requirements in accordance with the recommendations contained in the report of the committee on minimum standards, adopted June 5, 1899. The subject was further discussed by Drs. William Warren Potter, Buffalo, and Augustus Korndoerfer, Philadelphia.

The officers of the National Confederation of State Medical Examining and Licensing Boards for the ensuing year are as follows: President, Dr. J. N. McCormack, Bowling Green, Ky.; vice-presidents, Dr. N. R. Coleman, Columbus, O., and Dr. James A. Egan, Springfield, Ill.; secretary-treasurer, Dr. A. Walter Suiter, Herkimer, N. Y.

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## Philadelphia Pathological Society.

*May 10, 1900.*

### ALVEOLAR SARCOMA OF THE CHOROID.

Drs. **Wm. Campbell Posey** and **E. A. Shumway** reported a case and presented specimens from a patient aged 70 years. Three months previously the patient had received a blow in the region of the affected eye, since which there has been a history of pain, with gradual failure of eyesight until total loss of vision occurred. The conjunctiva showed bogginess, the anterior chamber was reduced in size, the lens cataractous, the fundus normal. An intraocular growth was suspected and an enucleation was done. The healing was prompt, but death occurred nine weeks later, probably from metastasis to the liver and brain. After enucleation the eyeball was placed in Müller's fluid for many months, and later was frozen in ice and salt, and finally mounted in glycerin-jelly. Another specimen was stained with Weigert's nerve-sheath stain, and with eosin and hematoxylin. On examination the retina was found detached, the subretinal space occupied by an endothelial growth. Changes were also found in the cornea, due to pressure and edema. The epithelial tissues were edematous, the iris pressed against the cornea, certain areas of which appeared atrophic. The anterior capsule of the lens contained pigment cells. The ciliary body was flattened and atrophic. The choroid showed round-celled infiltration and proliferation of endothelial cells of the blood-vessels. The tumor essentially consisted of endothelial cells separated by a connective-tissue stroma into distinct acini with pigment cells with round and irregular nuclei. Some of the cells were three times the normal size. The retina was detached and degenerated. The optic nerve did not seem to be infiltrated by the cellular growth. The growth resembled in some respects a similar specimen formerly presented before the Society by Drs. deSchweinitz and Steele. As the cells showed a proliferation of the endothelial type it could not be properly looked upon as a carcinoma.

Dr. **Simon Flexner** spoke of the areas of degeneration present, which he thought might be ascribed to a colloid or hyaline change. He had seen a similar case in which death also occurred. In this the cells were of a distinct endothelial type and there had been a hyaline or colloid change within the protoplasm of the affected cells.

### CARCINOMA OF ILIUM.

Drs. **Simon Flexner** and **A. O. J. Kelly** presented a specimen of carcinoma of the ilium. The patient was a man 44 years of age, who had given a history of having had numerous bilious attacks, attended by obstinate constipation. One year previously he had taken cold, and later complained of pain in the left chest anteriorly, in the region of the ninth costal cartilage. This pain was intermittent and was accompanied by tenderness. Three months ago he began to have pain in the region of the epigastrium. On examining the chests the physical signs revealed consolidation at the right apex. The patient had continually lost flesh. Two weeks ago he became obstinately constipated, and this was later attended by visible peristalsis. The diagnosis of intestinal obstruction was made.

Dr. Flexner detailed the pathologic findings as follows: A tumor the size of a hen's egg was found at the lower end of the ilium. The region of bowel affected showed a considerable degree of hypertrophy, but the surrounding parts otherwise appeared to be perfectly healthy. The tumor growth extendea to the ileocecal valve. In the main body of the tumor an area of ulceration was found. The orifice of the cecum admitted a lead pencil. This case is one in which a carcinomatous growth was circumscribed to a small area of the bowel without involvement of the neighboring glands, and would doubtless have been amenable to operative procedures if its real nature had been known in time.

## Cincinnati Academy of Medicine.

### SPLENOMYELOGENOUS LEUKEMIA.

DR. MARK BROWN presented a patient with splenomyelogenous leukemia, shown last fall. (See THE JOURNAL, vol. xxxii, p. 794.) During the last six months the spleen has continued to increase in size until it is now about ten inches beyond the median line of the abdomen and inferiorly well below the iliac crest. He has suffered principally from a severe dragging abdominal pain. The blood shows over 4,000,000 red corpuscles and something over 200,000 white ones; while the differential count does not differ materially from that of last fall. He has been taking arsenic—Fowler's solution—in the interim, and has become very susceptible to its influence, toxic symptoms often becoming manifest after a few doses. He has had no hemorrhage from any of the mucous membranes during the entire course of his disease. Ophthalmoscopic examination was negative, right and left, aside from marked pallor of reflex.

### HEREDITARY SYPHILIS.

DR. MEYER HEIDINGSFELD presented two patients—mother and daughter, the latter aged 13. The mother is afflicted with a typical serpiginous pigmented syphilide affecting the legs, the daughter, presenting teeth, which, taken in connection with the mother's condition, caused him to regard it as unmistakable evidence of hereditary syphilis. He could obtain no history of specific disease from either the woman or her husband.

### RUPTURE OF COAT OF CAROTID.

DR. H. T. GAN presented a patient, male, aged about 60 years, who had met with an accident, involving the region of the neck on the left side. He had developed, as a result, a most pronounced thrill in the region of the carotid artery, with a long buzzing murmur on auscultation. On the right side was a similar condition of affairs but less pronounced. Over the artery ring was a slight systolic murmur. The diagnosis was a rupture of the internal coat of the carotid artery, and also an arteriovenous aneurysm.

### OVARIAN ABSCESS.

DR. C. D. PALMER read an account of an operation on an ovarian abscess on the right side. On examining the left appendage, he found pyosalpinx, but before complete removal could be affected, the woman's condition became such that it was necessary to discontinue the operation. She recovered, however.

### TUBAL PREGNANCY.

DR. R. B. HALL reported a case of ruptured tubal pregnancy on the right side, with pyosalpinx on the left. An operation was performed and the patient recovered.

## New York County Medical Association.

*Special Meeting, May 11, 1900.*

Dr. Parker Syms, First Vice-President, in the Chair.

This session was called to consider a communication from the New York State Medical Association inviting the county association to become a subordinate county organization of the state association, in accordance with the provisions of the newly-acquired charter of that association.

DR. FREDERICK HOLME WIGGIN moved the adoption of the following resolutions:

WHEREAS, The New York State Medical Association has made and constituted the New York County Medical Association a subordinate county association of said state association; and

WHEREAS, The New York State Medical Association has requested that our county medical association ratify such action by resolution: Be it

*Resolved*, That, at a duly called special meeting of the New York County Medical Association, held at the New York Academy of Medicine, No. 17 West Forty-third Street, in the County of New York, New York State, on the 11th day of May, 1900, said New York Medical Association hereby accepts and ratifies the action of the New York State Medical Association, and by virtue hereof agrees to obey the laws, rules and regulations governing such state and subordinate county associations, and to become a subordinate county association of the New York State Medical Association in all respects; and be it further

*Resolved*, That a certified copy of the resolutions be forwarded to the Secretary of the New York State Medical Association.

Dr. Wiggin, in speaking to the motion, said that his efforts to correct the abuse of medical charity had early acquainted him with the general lack of co-operation among the members of the medical profession and the evils arising therefrom. This led him to desire better organization, and in looking for this, he became impressed with the good features of the plan on which the Connecticut Medical Society is organized, and it is along this line that it is proposed to build up the reconstituted New York State Medical Association. The plan of organization has not been definitely settled, but among the features which, in time, it is expected will be introduced is that of affording to the members protection against unjust suits for malpractice. Another advantage of such membership is that the medical directory will be furnished free. Such a directory is useful to country physicians, as well as city practitioners, as it enables the latter to direct their patients to proper medical advisers while sojourning in the country. It should be remmbered that a work of this kind can not be kept free from objectionable advertisements and other undesirable features unless published through the co-operation of the profession.

DR. E. ELIOT HARRIS explained that the proposed re-organization means greater strength and is for the best interests of the general public as well as for the medical profession. A united profession is a necessity when it comes to influencing legislation.

The question at issue was then put to vote, with the result that the Association unanimously adopted the resolution as read.

## New York County Medical Association.

*New York City, May 21, 1900.*

Frederick Holme Wiggin, M.D,, president.

### SARCOMA CUTIS.

DR. WILLIAM S. GOTTHEIL presented two cases of this disease. The first was of the typical variety known as multiple pigment sarcomata of Kaposi, and had existed for about six years. It had improved somewhat under injections of arsenic. The second case was also of long duration. Both patients were men.

### SYMPOSIUM ON ORGANOTHERAPY.

### THERAPEUTICS OF SUPRARENAL CAPSULE.

DR. WILLIAM H. BATES opened this symposium with a consideration of this topic. He said that extensive experience has taught him that sterile solutions of this extract are harmless, and that the dose can be varied almost indefinitely without ill effect. Its chief action is as a tonic to the muscular system. In preparing it, one part of the dried extract should be boiled with ten parts of a saturated solution of boric acid, and then filtered and boiled once more in the permanent receptacle. He has obtained most excellent results with this extract in acute conjunctivitis, and even in gonorrheal ophthalmia. Chronic rhinitis is, at least, temporarily benefited by it, and nasal operations can be performed bloodlessly by its aid. He looks on it as almost a specific for hay-fever, and other observers have reported benefit from its use in edema of the glottis and in laryngeal phthisis.

### THERAPEUTICS OF THE PITUITARY BODY.

DR. WILLIAM M. LESZYNSKY read a paper on this subject. He said that tablets containing the equivalent of eight grains of the fresh pituitary gland are on the market, but the results of the treatment of acromegaly by the use of this remedy has been so contradictory as to be valueless. In two cases of this affection, under his own observation, these pituitary tablets were administered daily for several months, but without any appreciable effect—indeed, there is evidence that the hypophysis grew larger during this period. This alleged remedy has only been used empirically; it has proved inefficacious and there are not, in his opinion, rational grounds for its use.

### THERAPEUTICS OF THE THYROID GLAND.

**Dr. Hermann M. Biggs** considered this topic. He said that thyroid extract has been chiefly used in the following conditions: 1, exophthalmic goiter; 2, psoriasis, eczema, lupus and certain other diseases of the skin; 3, goiter, 4, certain forms of insanity; 5, obesity; 6, retarded development in children; 7, tetany, and 8, in a number of blood disorders, such as chlorosis, anemia, syphilis and arteriosclerosis. He has employed this extract in two cases of Graves' disease, and in both with aggravation of the symptoms. Our present knowledge does not admit of its use in skin affections except in a purely empirical manner. Its effect on lupus is similar to that of tuberculin. The thyroid extract has been administered with encouraging results in some cases of mental derangement appearing about the time of the menopause, and in some of stuporous insanity. Except in fibroid goiters, the administration of this usually causes a diminution in the size of the goiter. In certain obese individuals the rapid loss of flesh under the use of thyroid extract is quite remarkable. It is desirable to begin with small doses, and to carefully watch the effect. It has also acted well in a few children showing retarded development without cretinism, but the most brilliant results have been, of course, secured in cases of sporadic cretinism. The chemistry of the thyroid gland was still but little understood.

### THERAPEUTICS OF THE THYMUS GLAND.

**Dr. Solomon Solis-Cohen**, of Philadelphia, read a paper on this subject, to be published in The Journal.

### THERAPEUTICS OF THE MAMMARY AND PAROTID GLAND.

**Dr. John B. Shober**, of Philadelphia, read a paper with this title. It will appear in The Journal.

**Dr. Oliver T. Osborne**, of the Yale Medical School, opened the general discussion. He expressed the belief that exophthalmic goiter is the result of hypersecretion of the thyroid gland, as the symptoms are almost identical with those of over thyroid feeding. Much stress has been laid on the size of the gland in this connection, but it is not difficult to conceive of all degrees of secretory activity, irrespective of the size of the gland. It is worthy of note that this gland usually begins to undergo atrophy at the age at which most people normally grow stout, and that women constitute about 80 per cent. of all the cases of Graves' thyroid disease and of myxedema. This preponderance among women might possibly be explained, in part, by the hypersecretion of the thyroid taking place at frequent intervals in the life of the average woman, i. e., at the menstrual periods and during pregnancy. It has been noted that the thyroid treatment of obesity was most successful in persons who became stout between 40 and 50 years of age. From our knowledge of the physiology of the thyroid gland, and of the very small quantity of thyroid secretion distributed to the system daily, it seems proper to criticise the large doses of thyroid extract that have been given. He is disposed to believe that thyroid extract would do the most good in those cases of eczema developing in old age. The thymus gland should prove useful in all cases in which nuclein is indicated. The speaker said that two or three years ago he had propounded the theory that giantism was the result of hypersecretion of the pituitary, and that acromegaly was due to perversion of this pituitary secretion. Extracts from the infundibular portion of the pituitary body are capable of increasing the blood-pressure, while extracts from the hypophysis have an action similar to thyroid. He thinks there is a distinct controlling influence exerted on acromegaly by the administration of extract of the pituitary body. Experiments made in the laboratory at Yale demonstrated, thath the blood-pressure is not raised by giving suprarenal extract by the mouth or hypodermically.

**Dr. Francis J. Quinlan** extolled the virtues of suprarenal extract, which he characterized as a remedy second only to cocain. It is exceedingly useful in acute coryza, and in nasal surgery generally, possessing the very great advantage of being free from bad after-effects, and not giving rise to a drug habit.

## Philadelphia Pathological Society.

*May 25, 1900.*

**Dr. A. A. Eshner** presented the following specimens: 1. Dilatation of the heart, valvular disease and perisplenitis. 2. Cerebral hemorrhage and ruptured aortic leaflet.

### PNEUMONOMYCOSIS.

**Drs. L. Pearson** and **M. P. Ravenel** presented specimens from a case of pneumonomycosis due to the Aspergillus fumigatus. Of this disease, eighty cases have occurred in man, the lower animals and birds. The first one occurring among birds was reported in 1815; and the first in man in 1842. Virchow later took up this study, with valuable results, and Osler several years ago reported a case to this Society, in which the Aspergillus fumigatus had been found in the sputum of a man. In 1897, Raynaud proved that the disease was a primary one; and it has been found that birds, such as pigeons, doubtless owing to the high temperature of the blood, are easily affected by the disease. Two types of the disease are known, one resembling bronchitis, and the other tuberculosis. The case herewith reported occurred in a cow 6 years of age, and since the animal had always lived on one farm, it was doubtless a primary infection. She had been failing for two months, and it was thought that tuberculosis was present, but no reaction to tuberculin had been obtained. The cough later became troublesome, and death ensued. At the autopsy, nodular growths in the lungs had been found, in some respects resembling hemorrhages. On rubbing a small piece of one of these with glycerin, it was found to contain myriads of the mycelial threads. Pure growth had been obtained on a potato and some of it had been inoculated into a rabbit, causing death within forty-eight hours. This mould grows at a higher temperature than any other form of aspergillus, and since it does not develop toxins or antitoxins, doubtless causes death by acting as a mechanical irritant. The microscopic examination shows cellular infiltration with connective-tissue cells, red blood-corpuscles, and large numbers of mycelial threads extending to the walls of the bronchi, and in many instances, entirely blocking them. Peribronchitis and arteritis are present, and also large areas of emphysema.

**Dr. Simon Flexner** stated that several years ago he had examined a pseudomembrane taken from the nose of a man, and found that the appearance corresponded with the findings described by Drs. Pearson and Ravenel. He believed the condition to be due to the Aspergillus fumigatus.

**Dr. Napoleon Boston** spoke of the changes in the urine produced by the presence of this mould, in that a formation resembling a pseudomembrane would at times occur, which in some respects resembled the product found on normal urine.

### BACILLI OF PLAGUE.

**Dr. Joseph McFarland** presented cultures and tissue preparations showing plague bacilli. From certain descriptions given, the bacilli of plague described by Yersin and Kitasato differed and it was probable that the two were dissimilar organisms. The bacillus of plague is not distinctly morphologic. Usually it is a short bacillus resembling a coccus, occurring singly or sometimes arranged in chains of six or seven. They grow well on agar-agar, gelatin, bouillon and ascitic fluid. In the hanging-drop it is found that they do not change form. The reaction of the culture-media, as shown by phenophthalein, does not change and it does not coagulate milk. No growth occurs on potato, and the best temperature for it is that of the human body. The bacillus has been found to live on dried threads for a period of twenty days. The microorganism is fatal to rabbits, producing a peculiar condition of the thymus gland. No effect is produced on cats. The bacillus rapidly becomes attenuated on artificial culture-media regaining its virulence by being passed back through certain animals.

**Dr. Simon Flexner** spoke of the morbid anatomy which he had seen in certain cases of plague in Hongkong. One being acquainted with the disease could recognize it by these changes, especially if of the glandular variety. In these enlarged glands the occurrence of hemorrhage is noted. Even in the pneumonic type they are prone to occur.

### PAPILLOMATOUS EPITHELIOMA.

**Dr. A. O. J. Kelly** presented a specimen of papillomatous epithelioma of the pelvis of the kidney obtained from a woman

68 years of age who had suffered with vague symptoms including attacks of hematuria. In a search through the literature on similar conditions it had been found that renal calculi had usually been present.

#### CIRRHOSIS OF LIVER.

DR. SIMON FLEXNER presented microscopic sections showing the nature of the new tissue in this affection and spoke of its distribution. The work had for the most part been done by students under his direction at the University of Pennsylvania. The findings proved that the new growth corresponded histologically with the tissues occurring in the liver. Sections from cases of hypertrophic and atrophic cirrhosis of liver were shown.

### Philadelphia Pediatric Society.

President, Dr. Alfred Stengel, in the chair.

#### MENINGOCELE OF OCCIPITAL BONE.

DR. JOSEPH SAILER—by invitation—presented a case of supposed meningocele of the occipital bone. The patient was a girl 3 years of age, who had in December last suffered from a fall down stairs. For some time she appeared to be quite drowsy, and her face became livid, then soon she was as well as ever. A month after the fall strabismus developed; nausea and vomiting occurred, and in a short time the gait became ataxic. There was a slight inco-ordination of movement, but choked disc was not present. Three weeks ago a small round tumor developed in the region of the occipital protuberance, and was smooth and fluctuated. Pulsation was also present; and on pressing down firmly. an irregular orifice was apparent in the occipital bone. On aspirating the tumor its contents was found to be blood; a fact that might lead one to believe that the tumor was some form of aneurysm.

DR. REYNOLDS WILSON stated that one thing which might aid in differentiating this tumor from one of congenital origin is the fact that its site was below the occipital protuberance, while if it were of congenital origin, the site would be slightly above.

DR. J. H. JOPSON had examined the tumor and believed that it communicated with the cranial cavity.

#### ACUTE ADENITIS.

DR. ALFRED HAND, JR., read a paper and reported several cases of this; and also made some remarks on the terminology and treatment. The first case was one in which a girl, 21-months old, had suffered from enlargement of the cervical glands, and irregular fever—102.8 F. to normal on the same day. There had not been any rash. On the fifth day, cylindroids were found in large number. Two other cases were reported; and in all these, the drug which seemed of greatest value was pure ichthyol, applied twice daily.

DR. J. P. CROZER GRIFFITH reported an epidemic of doubtful nature which had attacked two households. There had been swelling of the cervical glands with fever—in one instance rising to 104 F.—together with nausea and vomiting. In the case of one patient, as there was at the time an epidemic of la grippe, he was under the impression that the cause of the disease was influenza with glandular manifestations.

DR. A. G. ROUSSEL had several years ago investigated the bacteria found in the throat in these cases of glandular fever and found that the principal form was streptococci, rather than staphyloccocci.

DR. S. McC. HAMILL believes that the real cause of the malady is as yet quite unknown. He relates one case in which a doughy feeling had been present over the affected gland, leading one to believe that it might be diphtheria. Cultures showed both staphylococci and streptococci.

#### GRAVEL IN A CHILD.

DR. H. D. MARCUS reported a case of gravel in a child 3 years of age, who had been suffering since last year with increased frequency of micturition, scanty urine and gastric disturbances. Its real nature had been determined by means of the sound.

#### BACILLUS PYOCYANEUS.

DR. W. R. NICHOLSON reported a case of [illegible] bacillus. He stated that at one time cases of [illegible] diathesis seen in children were supposed [illegible] but later were believed to be due to septic infection. In some features they resemble septic infection without the splenic enlargement. The mortality is high—over 70 per cent. A case was reported in which a child, on the sixteenth day after birth, developed hemorrhages affecting the mucous membrane of the mouth, and also from the bowel. The umbilical cord had healed normally, but after the hemorrhages began quite a large extravasation of blood developed around the site of the cord attachment. Death occurred. No ulcers could be found in the intestines. The pancreas showed a considerable degree of hyperplasia with thickening of blood-vessel walls. The thymus showed slight degeneration. Cultures from the bile and tissues of the liver showed the bacillus pyocyaneus. The bacillus lactis aerogenes and staphylococcus albus were also found widely distributed.

### New York Academy of Medicine.

*May 17, 1900.*

William H. Thompson, M.D., President.

#### POISONOUS SNAKES AND SNAKE POISON, WITH DEMONSTRATIONS.

DR. GUSTAV LANGMANN read a paper on this subject. He described the teeth and the poison fangs, and told of the poison glands, which are triangular and the homologues of the parotids. The secretion can be retained at will, if need be for months. Each species has a specific smell for the poison; in many, it is "mousy." Until recently it has been supposed that the effect of the poison was dependent on the virulent bacteria contained in the secretion, but cultures made in different media have given negative results. The first chemical examination of the poison was made with the viperidæ, and the active principle received the name of viperine. Dr. S. Weir Mitchell, in 1883, published the results of his investigations. He found two albuminoids, one dializable and coagulable by heat; the other not. Dr. Langmann thinks it reasonable to suppose that the active principles are albuminoses. Different poisons contain different proportions of peptone and globulin; the former causes some local edema with convulsions, and finally paralysis of the respiratory centers, while the latter, on the contrary, excites local reaction with hemorrhages around the point of injection. Experience has shown that the intensity of the hemorrhages and paralyses correspond to the hydrolysis of the albuminoses. If instant death occurs, it is due to thrombosis. The first effects of the cobra bite are burning pain and edema; then appear vertigo, weakness of the limbs, paraplegia, ptosis, paralysis of the tongue and epiglottis, and inability to speak. The pulse is weak, and the respirations slow and labored. Slight convulsions occur toward the last. The effects of the rattlesnake bite show themselves in hemorrhagic disturbances and bloody effusions from all the mucous membranes, and the constitutional disturbance can be noted within thirteen minutes after the injection. After a temporary increase in the reflexes, tetanus and paresis supervene, with paraplegia. Death usually occurs in twelve hours, but if one survives the paralysis, septic fever may develop. Autopsies on those dying from snake-bites show the serous membranes ecchymotic throughout, especially the peritoneum. The blood is liquid and coagulates very slowly. If death occurs in a few minutes, it is from general thrombosis; if within twenty-four hours, it is from paralysis of the respiratory centers; and if after days or weeks, it is probably from sepsis. Weir Mitchell at one time gave the mortality from the bite of the cobra as 25 per cent., at another, stated that it was not more than 12; while in Australia, it is said to be about 7. The objects of the treatment of snake-bites are: 1. To prevent the absorption of the poison; 2, to destroy or neutralize its effects; 3, to accelerate its elimination; 4, to treat the symptoms. The ligature should be applied promptly and tightly. Sucking the wound with the lips or with glass-cups is of doubtful utility; and if employed, should be preceded by free scarification, as it is doubtful if the poison can be neutralized at the point of its introduction. In view of the fact that the kidneys are implicated, measures directed toward increasing [illegible] of these organs do not seem to be [illegible]ted. [illegible] considers the only reliable antidote [illegible] eff[illegible]: full protection being afforded [illegible]hin 1½ hours after receiving the bite. He believes that its action is chemical rather than physiologic.

Dr. Langmann demonstrated the method of handling poisonous snakes, handling with impunity a five-foot black diamond rattler and other venomous snakes. The copperhead, he said, was by no means extinct, for three years ago sixty-nine of them had been caught on the Palisades of the Hudson River. To collect the poison, he uses a glass funnel, over which a piece of chamois is tightly stretched. The snake on being brought close to the chamois, immediately buries its fangs in it, and the poison can be seen dripping down into the funnel; to expedite its passage, he presses the poison glands with his fingers.

## Ontario Medical Association.

*Twentieth annual meeting, Toronto, June 6 and 7, 1900.*

Acting vice-president, Dr. Adam H. Wright, was elected to the presidency, that office being vacant through the death of Dr. J. E. Graham.

### MORPHIA IN PUERPERAL ECLAMPSIA.

Dr. David Hoig, Oshawa, contributed a paper on this subject, in which he said that his experience with morphia in this condition had always given him very gratifying results. He recited the history of eight cases, in three of which there was no history of any renal insufficiency. He always made it a practice to examine the urine from time to time, and has frequently noticed albumin present, and no convulsions. He instanced a case where twins were born, no doctor being present, and ten minutes thereafter the woman was dead. without anything, not even convulsions, to account for it.

Dr. John Ferguson, Toronto, in the discussion, stated that it was now generally recognized that puerperal convulsions, even of a severe type, may occur without albumin in the urine; and that the occurrence of albumin may be for the first time known in the history of the patient—in fact, abundance of albumin, without convulsions. There may also be a successful pregnancy in an old albuminuric; in chronic disease of the kidney, without convulsions.

Dr. J. L. Bray, Chatham, speaking of the treatment, did not think that morphia alone was sufficient, as his experience with it had not been successful; free elimination and chloroform having done more for him. As yet the cause of these convulsions is not known. He has observed that when he has a case of convulsions appearing before labor, the prognosis is generally unfavorable; but when they come on after delivery, it has been favorable. He laid great stress on free elimination; for this he gives elaterium or croton-oil. In venesection he has often been unable to get the blood to flow. He instanced one case where the patient had thirty-three convulsions after delivery, with recovery.

Dr. K. C. McIlwraith, Toronto, emphasized the importance of giving at least 1/2 gr. of morphia, hypodermically, as smaller doses than that are not good.

Dr. Barrick, Toronto, stated that his experience was just opposite to that of Dr. Bray. He had found that the chances were not so good where the convulsions come on after delivery.

Dr. Harrison, Selkirk, said that, in fifty years' practice, he had seen a great many cases of eclampsia, and he concurred in the statement of Dr. Barrick. He has always regarded these cases with convulsions after delivery as dangerous. In properly selected ones he bleeds.

Dr. Hoig upheld large doses of morphia. He referred to the debilitated state in which the patient is left after these attacks, and said that the long loss of albumin was responsible for many of the sudden deaths.

### APPENDICITIS, ITS RECOGNITION AND OPERATIVE INTERFERENCE.

Dr. Luke Teskey, Toronto, divided this affection into three classes: chronic catarrhal, acute circumscribed and the fulminating or gangrenous appendicitis.

Speaking of the first variety, he said that in many instances the pain is not referred to the appendiceal region at all, but to the epigastric. He laid particular stress on the loss of power in the digestive functions throughout the alimentary tract, associated with marked loss of body weight. These sometimes cause this form of appendicitis to be mistaken for chronic tubercular affection of the abdominal viscera, and sometimes for chronic indigestion. He referred to recent cases of chronic indigestion, when an operation was performed for appendicitis, and this simple catarhal condition was found, without any foreign body in the appendix, but with enlarged lymphatic glands in the vicinity thereof. After operation in these conditions, the recovery was most complete and perfect, so much so that within two or three months they regained their weight and usual power of digestion. Palpating the appendix gives uncertain evidence.

The second class is the form of the affection in which Nature has succeeded in organizing adhesions sufficient to incarcerate the disease to a limited area. This is perhaps the most frequent form. The symptoms were considered, and he said that this class is not difficult to recognize after it has gone on for a short time. When the disease is low down in the pelvis, it is difficult to discover it by palpation. If tumescence can not be found it will be possible to get a degree of resistance, whether low in the pelvis or up toward the liver. This degree of resistance, which is very important, will lead, together with general symptoms, to a diagnosis.

The third class—the acute, fulminating or gangrenous appendicitis—has the greatest degree of intensity of inflammation, produced by the greatest degree of infection, which has created the inflammatpry act, so that gangrene is invariably formed. At times it may not be localized in the appendix but in the adjacent structures. Severe symptoms may be expected from the commencement onward. The attack is so intense that Nature makes no attempt to circumscribe. The symptoms are those of septicemia. The amount of tympanites may cause the physician to overlook the exact conditions present. Various sinuses may be formed, imperfectly draining abscesses in the abdominal cavity to various surfaces, perhaps most frequently to the intestinal.

In regard to the operative treatment in the first class, when a diagnosis is made he has no hesitation in pronouncing in favor of operation. He believes that the recoveries should be 100 per cent. In the second class of cases, if he can diagnose the condition within twenty-four hours, by carefully feeling for the resistance, it is the moment for operation. The danger in waiting any longer is that septic material will be absorbed, and trouble begin in other localities.

In the third class, the only hope for life is in an early operation.

*(To be continued.)*

# Association News.

## AMERICAN MEDICAL ASSOCIATION.

*Fifty-first Annual Meeting, held at Atlantic City, N. J., June 5-8, 1900.*

### Official Minutes of the Sections.

### SECTION ON PRACTICE OF MEDICINE.

### Tuesday, June 5—Afternoon Session.

The regular work of the Section on Practice of Medicine commenced with the address of the Chairman, Dr. George Dock, Ann Arbor, Mich. Papers were read by George M. Gould, Philadelphia; C. N. B. Camac, New York City; M. Howard Fussell, Simon Flexner, J. H. Musser and J. C. Wilson, Philadelphia; and W. Black Stewart, Atlantic City.

### Wednesday, June 6—Morning Session.

Papers were read by T. J. Happel, Trenton, Tenn.; and Eugene Wasdin, Surgeon, U. S. M.-H. S. Dr. Happel's paper was entitled "Pseudo (?) or Modified (?) Smallpox," and led to a discussion which manifested some ill-feeling on the part of fellow-practitioners from his own state and Missouri.

### RESOLUTION CONCERNING SMALLPOX.

The following resolution was moved by Dr. McCormack: That it is the sense of this Section that the cases detailed by Dr. Happel were mild but genuine smallpox, and that his failure to enforce rigid and systematic isolation and vaccination is to be sincerely regretted, and that to the prevalence of such views, popular and professional, is due the wide and disastrous epidemic now prevailing in this country.

The resolution was declared out of order by the Chairman.

Papers were also to have been read by Robert B. Preble, Chicago; De Lancey Rochester, Buffalo, N. Y.; H. S. Anders, Philadelphia; Julius Ullman, Buffalo, N. Y.; and C. Am Ende, New York City. Owing to the Section adjourning for the General Session, it was decided that these papers should be read subsequently if time permitted.

### RESOLUTION ON DEATH OF DR. J. T. WHITTAKER.

During this session, the following resolution, presented by Dr. Osler, of Baltimore, Md., was adopted:

That in the death of Dr. James T. Whittaker, of Cincinnati, the profession of this country has lost one of its most distinguished ornaments, and the Section of Medicine of this ASSOCIATION an earnest and faithful member. That the heartfelt sympathy of the members now in session be extended to Mrs. Whittaker on the occasion of her great bereavement."

The secretary was instructed to forward a copy of this resolution to Mrs. Whittaker.

A resolution was also passed that on the following days the Section should not adjourn for the meeting of the General Session.

### WEDNESDAY, JUNE 6—AFTERNOON SESSION.

An interesting symposium on malaria was held. In their absence, the papers of Jesse W. Lazear, U. S. A., Havana, Cuba; and Chas. F. Craig, U. S. A., were read by the secretary. Other papers were read by W. S. Thayer, Baltimore, Md.; E. A. Woldert, Philadelphia; L. O. Howard, U. S. Dept. of Agriculture; Frank A. Jones, Memphis, Tenn.; Wm. Britt Burns, Deckerville, Ark. Dr. Preble also read his paper, which had been left over from the previous session. Officers of the Section for the ensuing year were elected as follows: chairman, Dr. J. M. Anders, Philadelphia; secretary, Dr. Wm. Britt Burns, Deckerville, Ark.

### THURSDAY, JUNE 7—MORNING SESSION.

In the "Symposium on Arthritis," papers were read by James J. Walsh, New York City; Daniel Riesman, C. W. Burr, and A. O. J. Kelley, of Philadelphia. A paper by J. C. Wilson, Philadelphia, was read by title. Papers on cardiac affections were read by N. S. Davis, Chicago; S. Solis-Cohen, Philadelphia; Louis Faugéres Bishop and John J. Morrissey, of New York City.

### THURSDAY, JUNE 7—AFTERNOON SESSION.

Papers on various phases of "Tuberculosis" were read. The following presented papers: W Freudenthal, New York City; J. M. Anders, Philadelphia; Carroll E. Edson, Denver, Colo.; C. P. Ambler, Asheville, N. C.; A. F. Lemke, Chicago; and Thomas J. Mays, Philadelphia. Papers were read by title for Charles Winslow Dulles, Philadelphia, and C. H. Hughes, St. Louis, Mo.

### FRIDAY, JUNE 8—MORNING SESSION.

The discussion on tuberculosis was continued from the previous day by Drs. Ambler, Mays and Lemke.

Papers on "Diabetes Mellitus" were read by James B. Herrick, Chicago; Heinrich Stern, New York City; and Milton B. Hartzell, Philadelphia. Papers were also read by O. T. Osborne, New Haven, Conn.; James M. Peck, Arlington, Ky.; and Julius Ullman, Buffalo, N. Y. The papers of Felix Vitale, Coytesville, N. J., and D. D. Stewart were read by title.

### FRIDAY, JUNE 8—AFTERNOON SESSION.

Papers were read by Dr. Bertram W. Sippy, Chicago; A. Marcy, Jr., Riverton, N. J.; D. Benjamin, Camden, N. J.; C. Am Ende, New York City; William Duffield, Phœnix, Ari.; Robert L. Watkins. New York City, and H. S. Anders, Philadelphia. A paper by J. J. Kindred, New York City, was read by title.

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## SECTION ON MATERIA MEDICA, PHARMACY AND THERAPEUTICS.

### TUESDAY, JUNE 5—3 P. M.

The Section met in the west room of the Casino, Steel Pier. L. L. Solomon, Louisville, Ky., was chairman; J. W. Wainwright, New York City, secretary; seventy-three members and guests were in attendance. Profs Joseph Remington, of Philadelphia; Elas H. Bartley, of New York City, and A. B. Lyons, of Detroit, Mich., delegates from the American Pharmaceutical Association, were introduced.

The Chairman delivered his address, which was referred to the Committe on Papers to report on the recommendations therein contained.

The following committee was subsequently announced: N. S. Davis, Jr., Chicago; H. T. Bishop and H. Stern, of New York City and O. T. Osborne and T. D. Crothers, New Haven, Conn.

The Chair also appointed Dr. J. M. Allen, Liberty, Mo., as a member of the executive committee.

A paper entitled "Treatment of Acute Alcoholism by Large Doses of Digitalis—A Clinical Study Based on Cases in the Alcoholic Wards of Bellevue Hospital," by Henry P. Loomis, New York City, was read by the secretary, and discussed by Dr. O. T. Osborne, New Haven, Conn. "Some Dangers from the Use of Narcotics on Young Persons" was the title of a communication by Dr. T. D. Crothers. This was discussed by Drs. J. M. Allen, Warren B. Hill, F. B. Greene, Frank Woodbury, Jno. T. Smith, W. W. Tompkins, A. B. Lyons, J. N. Upshur, and T. D. Crothers.

The next two communications were: "A Plea for Greater Simplicity in Therapeutics," by L. Faugéres Bishop, of New York City; and "Therapeutic Progress" by J. Tracy Melvin. These were discussed by Drs. N. S. Davis, Jr., Frank Woodbury, T. B. Greenley, O. T. Osborne, C. C. Fite, W. B. Hill, A. B. Lyons, J. N. Upshur, Geo. J. Lochbochler and the chairman. Dr. N. S. Davis, Jr., read a communication entitled "Dietetic Treatment of Diabetes." Dr. Heinrich Stern read a paper on "Coma Diabeticum and Its Treatment." The Milk Régime in the Diabetic State. Discussion on these was, on motion, deferred until the morning session.

On motion it was resolved to have no section banquet.

Dr. C. C. Fite read a paper by title, on "The Proprietary Medicine Question—A Postscript," which was referred to the Committee on Papers.

The Chairman announced the appointment of the following members to serve on the Nominating Committee: Drs. Warren B. Hill, F. G. Wheatley and J. C. Culbertson.

### WEDNESDAY, JUNE 6—MORNING SESSION.

The discussion of the papers on diabetes was opened by Dr. Osborne, followed by Drs. Allen, D. R. Brower, Zwisohn, Greenley, Shelly, Lyons, Bartley, Anders, Tompkins and Stern.

A volunteer paper by Dr. C. R. Marshall, Dundee, Scotland, on the "Pharmacology of Nitro-sugars," was read by title by the secretary, and was referred to the publication committee.

A communication was read by Dr. J. M. Anders on the "Treatment of the Gastrointestinal Symptoms of Typhoid Fever," which was discussed by Drs. Favill, Greenley, Reilly, Tompkins, Woodbury and Anders.

Papers entitled "A Brief Note on Ointments and Some of their Medical Applications," Dr. Frank Woodbury, Philadelphia; "Present Views on Use of Unbroken Skin as an Absorbing Medium," Dr. Thomas F. Reilly, New York City; "Idiosyncrasy Against Mercury—A Case of Erythema Mercuriale," Dr. A. Bernheim, of Philadelphia, were read and discussed together. The discussion was opened by Professor Remington, of Philadelphia, and continued by Drs. Reed, Greenley, Lyons, Wheatley, Upshur, Rahter, Woodbury, Reilly, Bernheim, and the Chairman.

A paper on "The Metric System" was read by Dr. F. G. Wheatley, N. Abingdon, Mass., and discussed by Professor Remington and Drs. Barclay, Upshur and Wheatley.

### AFTERNOON SESSION.

The first paper was read by Dr. T. B. Greenley, Meadow Lawn, Ky., entitled "Report of a Case, Illustrating Value of Rectal Injections of Salt Solution in Hemorrhage." It was discussed by Drs. Allen, Melvin and Greenley.

A paper on the "Hydriatic Treatment of Chronic Disorders," by Dr. J. H. Kellogg, Battle Creek. Mich., was read by title.

Dr. E. W. Mitchell, Cincinnati, read a paper on the "Preventive Treatment of Migraine," which was discussed by Drs. H. Stern, Yarnall, Benedict, Upshur, Allen, Barclay, and Mitchell.

Dr. S. Solis-Cohen, Philadelphia, presented a communication on the "Rôle of Drugs in the Management of Consumption." It was discussed in connection with the next paper on the "Importance of Early Recognition of Tuberculosis," by A. M. Holmes, Denver, Colo. Discussion was opened, by invitation, by Prof. Wm. Thompson, New York, who was followed by Drs. J. N. Upshur, Cohen and Holmes.

J. N. Upshur, Richmond, Va., read a paper on "Heart Tonics."

Papers by F. C. Shattuck, Boston, on the "Treatment of Peptic Ulcer," and D. D. Stewart, Philadelphia, on "Some Points in the Treatment of Gastric Ulcer," were read by title.

A paper was read, by invitation, by Wm. H. Thompson, entitled "Classification of Medicines, based on the Time Required to Produce Their Effects."

A vote of thanks was tendered to the reader of the paper and discussion postponed until next morning.

The Nominating Committee reported for chairman, N. S. Davis, Jr., Chicago, and for secretary, J. N. Upshur, Richmond, Va.

On motion, the report was unanimously adopted.

### THURSDAY, JUNE 7—MORNING SESSION.

The session opened at 9 o'clock, L. L. Solomon in the chair.

An election was held for officers for the ensuing year. The secretary announced the election of N. S. Davis, Jr., as chairman, and J. N. Upshur, as secretary.

The paper of J. H. Musser, Philadelphia, "On the Use of Strapping with Adhesive Plaster in Various Internal Conditions," was read by title.

J. M. Allen read a communication entitled "Therapeutics of Croupous Pneumonia." It was discussed by Drs. Hill, Marvel, Boice and Mitchell.

J. Leonard Corning, New York, by invitation, read a paper entitled "Therapeutics of Vertigo."

This paper was discussed by Drs. Benedict, Hill and Louis Lautenbach.

On motion, a vote of thanks was tendered Dr. Corning for his paper, with an invitation to affiliate himself in the future with this Section.

Louis J. Lautenbach, Philadelphia, read a paper on "Increasing the Value of Cod-Liver Oil by the Addition of Free Iodin and Free Phosphorus."

Referred by the chairman to Committee on Papers.

The paper on "Action of Chloralose as a Hypnotic" was read by title in the absence of the author, J. M. Tyson, Philadelphia.

### RESOLUTION ON GALENICALS.

Dr. A. L. Benedict, Buffalo, N. Y., on behalf of the Committee on Nomenclature, appointed at the last meeting to confer with the Convention for the Revision of the Pharmacopeia, reported the following:

*Resolved*, That the Section on Materia Medica, Pharmacy and Therapeutics of the AMERICAN MEDICAL ASSOCIATION most respectfully requests the committee on revision of the United States Pharmacopeia to act so far as possible in the interests of standardization of galenicals. In particular, the committee is requested—with such exceptions as may be inevitable—to provide for a solid and a liquid galenical applicable to every vegetable drug, commonly administered internally. Galenicals to be an identical name, but not necessarily prepared with identical excipients, or by identical methods, to be of uniform strength as regards the average crude drug, the liquid being of 50 or 100 per cent, strength and the solids of 100 or 200 per cent., as the committee may deem advisable.

*Resolved*, That a copy of this resolution be sent to each member of the Committee of Revision of the United States Pharmacopeia.

This was, on motion, adopted.

### THURSDAY, JUNE 7—AFTERNOON SESSION.

Dr. O. T. Osborne, New Haven, Conn., was called to the chair, in the absence of Dr. J. W. Wainwright, chairman.

The first paper read was entitled "Irrigation of the Colon, as a Therapeutic Measure," by Geo. J. Lochboehler, Washington, D. C.

The paper was discussed by Drs. Brower, Osborne, Culbertson, Bernheim and Lochboehler.

The paper on "Chills from Obscure Causes," by M. C. O'Brien, New York, was read by title.

Dr. Daniel R. Brower, of Chicago, read a "Protest Against the Use of Proprietary Remedies," which was discussed by Drs. N. S. Davis, Jr., Allen, Bernheim, Lyon, Lochboehler, Tompkins, Woodbury, Lyons and Brower.

"The Therapeutic Application of Organic Extracts" was the title of a communication by O. T. Osborne, New Haven, Conn. "The treatment of Addison's Disease, with Case" was read by John V. Shoemaker, Philadelphia.

The papers were discussed together by Drs. Bernheim, Marvel and Mitchell.

Dr. J. C. Culbertson, Cincinnati, read a paper entitled "Psychic Therapeutics."

It was discussed by Drs. Greenley, Bernheim, Wheatley, Upshur and Culbertson.

"A Symposium on New Remedies, Including Their Chemistry and Therapeutic Application," by J. W. Wainwright, New York, was read by title.

### FRIDAY, JUNE 8—MORNING SESSION.

"The Pharmacologic Assay of Drugs and Its Importance in Therapeutics," by J. M. Houghton, was read by C. T. McClintock, Detroit, Mich.

It was discussed by the Chairman, Prof. Lyons, Drs. D. Woodbury and C. T. McClintock.

A paper on "The United States Pharmacopeia," was read by Jos. P. Remington, Philadelphia.

"The Pharmacopeia, the Medical Journal, and the Profession," by A. L. Benedict, Buffalo, N. Y.; and "What Drug Standardization Means for the Physicians?" by A. R. L. Dohme, Baltimore, Md., were read by title.

The committee on papers, not having presented any report, was, on motion, discharged. Drs. Allen, Dickerson and Reilly were appointed a special committee.

It recommended that paper No. 30 on the program of this Section be returned to the author with the samples and not appear in THE JOURNAL, and that the recommendations contained in the address of the chairman be carried out.

### RESOLUTIONS ON PROPRIETARY PREPARATIONS.

Dr. W. L. Dickinson, St. Louis, Mo., presented the following resolution:

*Resolved*, That the Section on Materia Medica, Pharmacy and Therapeutics desires to express its unqualified disapproval of the use by members of this ASSOCIATION of all proprietary preparations of unethical composition, and entirely approves the course of the Trustees of THE JOURNAL in refusing to such pharmaceutical compounds the privilege of appearing in its advertising pages. This Section expresses the hope that the committee on arrangements of the next meeting will exercise sufficient vigilance over applications for space for exhibition to exclude all such unethical preparations and prevent their obtaining an apparent endorsement from the AMERICAN MEDICAL ASSOCIATION.

This was unanimously adopted.

Dr. J. M. Allen offered a resolution of thanks to the officers of the Section for the admirable program and management of the present meeting, which was seconded by Prof. Remington, and unanimously adopted.

The Section then adjourned *sine die.*

## SECTION ON NERVOUS AND MENTAL DISEASES.

### TUESDAY, JUNE 5—2 P. M.

Meeting was called to order by the Chairman, Dr. Hugh T. Patrick, at 2 p. m., in the Hotel Brighton Casino.

The Chairman's address was then read. It pertained largely to the practical working of the Section and presented many new ideas for improving its work. Dr. W. J. Herdman, Ann Arbor, Mich., then moved that the Chairman's address be referred to a committee of three for report as to recommendations given in the address. Carried. The Chair appointed Drs. W. J. Herdman, Daniel R. Brower and Jas. H. McBride.

Dr. Herm. H. Hoppe read a paper entitled "Report of Eight Operations for Brain Tumors and Cysts." This was discussed by Drs, Daniel R. Brower, C. H. Hughes, Wm. G. Spiller, Albert Sterne, Hertzol; the discussion was closed by Dr. Hoppe.

Dr. Brower moved that five minutes be made the limit of time for discussions. Seconded by Dr. A. A. Eshner. Carried.

Dr. Wm. G. Spiller read a paper on "A Case Resembling One of Raynaud's Disease, With Microscopic Examination." Discussion followed by Drs. Douglas Graham, Eugene G. Carpenter, D. J. McCarthy, closed by W. G. Spiller.

Dr. David Inglis read a paper on "Dual Action of the Brain." This was discussed by Drs. Luther Carpenter, Samuel Wolfstein, Graham, C. C. Hersman, Hughes, E. Pearce, Robert H. Porter, and closed by Dr. Inglis.

Dr. Richard Dewey read a paper on "Therapeutics of Travel and Change of Scene in Nervous and Mental Diseases," which was followed by a discussion by E. G. Carpenter, H. A. Tomlinson and Jas. H. McBride, and discussion closed by Dr. Dewey. The Chairman then appointed on the nominating committee: Drs. F. X. Dercum, David Inglis and Richard Dewey, to report the following day. Meeting adjourned.

The Section banquet was held at the Hotel Dennis, at 7 p. m., forty members and guests being present. Dr. J. Madison Taylor acted as toast-master. The dinner proved a most enjoyable occasion, and the prearranged speeches were well presented.

### Wednesday, June 6—Afternoon Session.

The meeting was called to order by the Chairman, at 2 p. m.

#### RESOLUTIONS ON CHAIRMAN'S ADDRESS.

The committee on the Chairman's address reported as follows as to recommendations made:

*Resolved*, That the name of the Section be changed to that of "Nervous and Mental Diseases."

*Resolved*, That consultations of officers of Section be held before adjournment (as provided for also in the new constitution and by-laws of the Association. forthcoming).

*Resolved*, That in the judgment of this Section there should be a chair of Neurology and Psychiatry, with powers and responsibilities equal to those of other chairs in medical colleges in good standing.

*Resolved*, That the address is commended for its eminently practical and suggestive character.

Dr. T. J. Happel read a paper entitled "Morphinism From the Standpoint of the General Practitioner," and Dr. T. D. Crothers one on "Medicolegal Relations of Opium Inebriety," which were discussed together by Drs. J. Keniston and W. S. Watson, the discussion being closed by Drs. Happel and Crothers.

Dr. Eugene G. Carpenter read a paper on "Cranial Injuries and Insanity, with Report of a Case." The discussion was by Drs. Huff, Dewey, G. W. McCaskey and Happel; closed by Dr. Carpenter.

Dr. W. C. Burr read a paper on "Trauma as a Cause of Nervous Diseases." Dr. Arthur Dean Bevan read one on "Traumatic Neuroses From the Standpoint of a Railway Surgeon," Dr. Jas. Hendrie Lloyd one on the "Medicolegal Relations of the Traumatic Neuroses," and Dr. Wharton Sinkler one on "Prognosis and Treatment of Traumatic Neuroses." This symposium was discussed by Drs. F. X. Dercum, Daniel R. Brower, Reginald Sayre, Chas. K. Mills, W. M. Leszynsky, Bishop, A. E. Sterne, David I. Wolfstein, Richard Dewey, W. S. Watson, Nathan Herman, G. W. McCaskey, R. H. Porter, C. C. Hersman and Hugh T. Patrick. The discussion was closed by Drs. Burr and Sinkler.

The Nominating Committee reported as nominees for the ensuing year for Chairman, Dr. H. A. Tomlinson, St. Peter, Minn., and for Secretary, Dr. F. Savary Pearce, Philadelphia. Executive Committee, by right of succession, Drs. C. H. Hughes, Fred Peterson and Hugh T. Patrick. The above officers were unanimously elected.

### Thursday, June 7—Morning Session.

A special meeting was decided on "necessary for completion of program."

Several papers received by secretary read by title. Dr. Guy Hinsdale spoke on the desirability of appointing delegates to the Nominating Committee of the Association as "Section Delegates," rather than from the states, as at present done; and the possibility of changing By-Laws of the Association. Dr. G. W. McCaskey discussed some matters in our relations as a Section to the General Session.

Dr. Guy Hinsdale read a paper on "Aphasia with Letter-Blindness, without Word-Blindness; with Right Hemiplegia and Pulmonary Tuberculosis," which was discussed by Drs. F. Savary Pearce, Jas. H. McBride and Wm. G. Spiller, the discussion being closed by Dr. Hinsdale.

Dr. Jas. H. McBride read a paper on "A Study of Cerebral Syphilis, with Report of Cases." The discussion was by Drs. D. R. Brower, H. A. Tomlinson, H. H. Levy, G. W. McCaskey, T. D. Crothers, Wm. G. Spiller and Hugh T. Patrick; closed by Dr. McBride.

Dr. C. C. Hersman presented a paper on "Post-Anesthetic Paralysis" that was discussed by Drs. F. Savary Pearce and Douglas Graham; closed by Dr. Hersman.

Dr. Daniel R. Brower read a communication on "Treatment of Neurasthenia." The discussion was by Drs. Jas. H. McBride, W. S. Watson, Richard Dewey, E. E. Mayer, C. C. Hersman, A. J. Pressey, Douglas Graham, and A. E. Sterne; closed by Dr. Brower.

### Thursday, June 7—Afternoon Session.

Dr. D. J. Wolfstein read a paper by Drs. F. W. Langdon and M. A. Brown and Wolfstein on "Combined Sclerosis of the Lichtheim-Dana Type Accompanying Pernicious Anemia."

The discussion was by Drs. W. G. Spiller and Hugh T. Patrick; closed by Dr. Wolfstein.

Dr. J. D. McCarthy presented a paper on "Migraine, with the Consideration of Heredity," that was discussed by Dr. Hugh T. Patrick.

Dr. A. A. Eshner read a paper on "Differentiation of Chorea and Disorders Simulating It;" Dr. E. E. Mayer one on "Evolutional and Involutional Types of Nervous Disease." These were discussed by Dr. G. W. Drake.

Dr. C. K. Mills opened the symposium on "Hysteria," by a discussion of the "Diagnosis of Hysteria from Organic Disease of the Brain;" and Dr. J. K. Mitchell read a paper on "Rest Treatment for Hysterical Diseases."

In the general discussion, Drs. W. G. Spiller, Douglas Graham, Bridge, Cooper, N. Herman, J. D. McCarthy, A. E. Sterne, G. W. Drake, E. E. Mayer, D. I. Wolfstein and C. H. Hughes spoke, and Drs. Mills and Mitchell closed it.

Motion was made and carried to hold a special meeting, Friday, June 8, at 9 a.m.

### Friday, June 8—Morning Session.

The meeting was called to order at 9:15 a.m.

Dr. F. Savary Pearce read a paper on "Hereditary Sub-Normal Color Perception;" the discussion being by Drs. G. W. Drake and Robert H. Porter; closed by Dr. Pearce.

Dr. G. W. Drake read a paper on "The Simplest Explanation of the Functions of the Nervous System." Discussion was by Drs. Wolfstein and Levy; closed by Dr. Drake.

Dr. A. J. Pressey read a paper on "The Necessity of a More Universal Knowledge of the Treatment of Morphinism, with Report of Cases." This was discussed by Drs. Dunham, H. H. Levy, J. R. Campbell, F. Savary Pearce and J. D. McCarthy; the discussion being closed by Dr. Pressey.

Dr. A. E. Sterne presented a paper on "Effect of Alcohol on the Nervous System." Discussion was by Drs. A. J. Pressey, G. W. Drake and H. H. Levy; closed by Dr. Pressey.

Dr. G. W. McCaskey read a paper on "Combined Gastric and Aural Vertigo, with Report of a Case;" discussed by Drs. D. I. Wolfstein, H. H. Levy and Hugh T. Patrick; closed by Dr. McCaskey.

The chairman brought up the matter of a petition against the abolition of the Pathologic Institute of New York, as presented by a number of leaders in pathologic investigation in that state. This had been signed by many leading neurologists in Boston, New York, Philadelphia, and elsewhere.

On motion, of Dr. Patrick, the chairman and secretary were instructed to sign the above petition for the Section. Carried.

Dr. J. D. McCaskey moved that fifteen minutes be the limit of time for papers. Not seconded.

Dr. E. W. Holmes read a paper on the "Anatomy of Hanging, with Some Recent Observations on Electrocution."

Dr. A. J. Pressey moved that a vote of thanks be accorded by the Section to the chairman and secretary for efficiency of work done for the session and the meeting.

Adjourned.

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AMERICAN MEDICAL ASSOCIATION.
61 MARKET STREET, - CHICAGO.

SATURDAY, JUNE 23, 1900.

## THE SECTION OF PATHOLOGY AND BACTERIOLOGY, AND THE PATHOLOGIC EXHIBIT.

The meeting of the "Provisional Section of Pathology" at Atlantic City convened at the invitation of the President of the Association. A program had been arranged, but no effort had been made to prepare an extended program, and it is quite safe to say that a much longer and more elaborate one could have been easily secured.

Through the efforts of a special committee the collection of specimens and other material on exhibition had been brought together. The Association unanimously voted to recognize the "Provisional Section of Pathology" as an official Section on equal footing with the other Sections. The Association also voted to continue the exhibition of specimens as an official and annual feature, placing the management of the exhibit in the hands of the Section of Pathology and Bacteriology, as this is the one most directly interested in the exhibit.

Thus the Association has assumed the sponsorship for a Section devoted to pathology and for an annual exhibition of pathologic specimens. We trust that in mapping out its field of work—which is quite unlimited—the new Section may heed the advice contained in the address of the Chairman of the Section on Medicine,[1] in which he suggests that special attention should be paid to experimental and general pathology and to the demonstration of specimens, technical methods and apparatus. It is true that much of the work in pathology should be brought out in the various clinical sections. The pathologist must keep close to the clinician. Surely the new Section, if properly conducted, need not hinder the pathologic part of the Section work. On the contrary, it may be expected to encourage such work because an opportunity is now afforded those especially interested in pathology and bacteriology to discuss questions that for the moment especially interest them. Hence the programs for the new Section should be brief and selected with exceeding care; many papers offered this one may be of more immediate good if presented in the appropriate clinical Sections.

There has been criticism of the tendency to multiply the medical Sections. The criticism is hardly applicable in this case, because it concerns a well-directed effort at the extension of the legitimate work and of the sphere of usefulness of an established national body of great strength. And it is to be hoped that, as one of the results of these new departures, the pathologists of the country may come to take more direct interest in the Association and its work.

An important, ever essential part of the work of the Section of Pathology and Bacteriology will be the pathologic exhibit. Numerous suggestions lie near at hand. Anatomic specimens should be selected with reference to their value in pathology; and, as pointed out by Dr. Dock,[2] it might be well to limit the source of specimens each year to the section of country in which the meeting is held. Labor, expense, and risk of damage would then be diminished, and a more general interest in the work created. The practical exhibition of apparatus should be encouraged. Children and minors should be excluded from the exhibit rooms. Special collections of anatomic specimens illustrating particular fields in pathology might be brought together, and in such undertakings the subjects proposed for discussion in the clinical Sections, as for instance, in that on internal medicine, might be taken as guides to the ground to be covered each year. In general, the aim should be to unify and correlate the scientific work at the meetings. For this purpose joint sessions of two or more Sections might be found desirable. At all events the programs of such Sections as the pathologic should be short and select, so as to give the members a chance to participate in the scientific work of others. In this way economy of room might be affected also, as two Sections might use the same room alternately.

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[1] Dock: The Journal, June 9.
[2] Ibid.

## ETIOLOGY OF GENERAL PARALYSIS OF THE INSANE.

Whether or not progressive paralysis of the insane and locomotor ataxia represent different localizations of the same disease is a debatable question. They have a number of points in common, and are not rarely associated. Both are more common in males than in females, in the city than in the country and in mature life than at any other period, result from syphilis more than from any other causative condition, and are not amenable to radical treatment. Some aspects of the etiology of progressive paralysis of the insane are discussed in a recent communication by Krafft-Ebing,[1] who characterizes this affection as one of the diseases evolved by nineteenth century civilization. Almost entirely unknown one hundred years ago, the number of cases has increased at a rapid rate nearly everywhere, as shown in part by the fact that the proportion of cases admitted to hospitals for the insane is greater than ever before. Further, the disease occurs at an earlier period of life than formerly, and it is only recently that it has been observed in childhood and youth. The proportion of cases in women is larger than it has been. The increased incidence of progressive paralysis is attributable to the pernicious effect on the mind and the body brought about by the inordinate demands in earlier life of existing social conditions, the abuse of stimulants, especially alcohol, and to a dissipated mode of life.

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[1] Am. Jour. of Insanity, lvi, 4, p. 645.

Ever since syphilis was first suggested as a cause of progressive paralysis, the appreciation of its importance in this connection has steadily increased. The statistics on this subject must be used with great care. They will necessarily vary considerably, according as they apply to the higher or the lower classes of society, and to urban or country populations. It has, however, been found that a history of syphilis is far more common in cases of progressive paralysis than in cases of insanity without progressive paralysis. The failure to obtain a history of syphilis is not convincing evidence of its absence, and it has been shown, in fact, that such a history can not be obtained in a not smaller proportion of actually syphilitic cases. In a number of instances of progressive paralysis in which no syphilitic history could be elicited, it was found impossible to inoculate syphilis, presumably in consequence of immunity conferred by previous infection. Further evidence of the immunity of cases of general paralysis to syphilis is afforded by the fact that they never come under observation with a primary lesion. An additional point in favor of the syphilitic origin of progressive paralysis is the fact that the relative proportion of cases in men and women coincides with the relative proportion of cases of syphilis in the two sexes in any community. A history of hereditary or rarely acquired syphilis can be elicited, also, in a large number of cases of the infantile and juvenile type of progressive paralysis.

Both syphilis and progressive paralysis are far more common in the city than in the country. Progressive paralysis is common in soldiers and rare in priests and in women of the better classes. In a word, it is rare wherever and whenever syphilis is rare, and vice versa. General paralysis is apparently uncommon in prostitutes, because such women are compelled to abandon their calling before the period at which general paralysis appears, and the disease is then charged to some other occupation. Krafft-Ebing admits that it can not be demonstrated that previous syphilitic infection is absolutely essential to the development of progressive paralysis, although he contends that the probabilities are strongly in favor of this view, particularly in view of the inoculation experiments. How the infection acts in causing the cerebral disease is not yet known, but syphilitic lesions are not found. The evidence shows that syphilis has increased greatly in recent years. This result is attributed to increased celibacy, the enormous expansion of commerce, the increasing volume of travel, the more widespread desire among women for pleasure and finery, and the starvation wages that drive the poorer grls into vice. The increase in the number of soldiers forming the standing armies of Europe and universal conscription are considered as additional and hardly less important factors.

As only a certain number of syphilitics are attacked by progressive paralysis, certain predisposing and accessory causes must be taken into consideration. These are to be looked for in certain biologic phases of life—the critical periods—in which the trophic processes in the organism, as a result of the developmental and functional activity of previously undeveloped organs—at puberty—or their involution—at the climacteric—are subject to great fluctuations, owing to changes in the conditions attending nutrition and circulation. Syphilis probably impairs the vitality of the tissues and diminishes their power of resistance; hence it is justifiable to assume that in this way it can induce a derangement in the evolutional processes, and render involution too rapid. The influence exerted by syphilis may be conceived as giving rise to an alteration in the vital properties of the nerve-elements, as a result of which premature involution is brought about. Progressive paralysis would thus be a manifestation of premature senility. Among the predisposing causes are hereditary taint and a neuropathic constitution, injury to the skull and the brain from rachitis, premature exhaustion of the brain from physical and mental stress, dissipation and other pernicious influences.

Progressive paralysis is not amenable to treatment, and its prophylaxis includes the suppression of prostitution and the prevention of syphilis and of alcoholic excess, and the physical and mental development of the individual.

Krafft-Ebing makes a plea that young men should receive seasonable instruction as to the dangers attending the illegitimate gratification of sexual desire. The senseless sophistry that sexual desire, justifiable of itself, but intensified by the pernicious outgrowths of civilization and nervousness, must be gratified, should be combated.

## INFLUENCE OF TRAUMA ON THE DEVELOPMENT OF TUMORS.

In order to obtain some idea as to the part played by trauma in the development of tumors, v. Bunger proposed that a collective investigation be instituted to cover the years 1893-1898. In response, Wurz[1] presents a study of the cases of tumor that were treated at v. Brun's clinic during this time. The material includes 584 malignant and 129 benign, in all 713 tumors. The relation of trauma to these tumors was studied critically, such factors as chronic irritation, scars, etc., being excluded. The principal forms of trauma studied consequently are contusions and small solutions of continuity of various kinds. Of the benign tumors, osteomata afforded the most striking examples of the action of trauma, the tumor beginning to develop as soon as eight to fourteen days after the injury. An instance is cited in which adenoma of the breast began immediately after an injury. On the whole, the outcome can not be said to be very striking, inasmuch as of the 129 benign tumors there were 5 cases altogether in which trauma had a probable influence, 3 possibly such, and 2 doubtful.

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[1] Beiträge f. Klin. Chir., 1900, xxvi, 567.

In the case of carcinomas, he mentions 8 instances in which the neoplasm seemed to follow small injuries and slight wounds, in which healing failed to take place.

As regards sarcoma, 6 instances probably due to injury are cited; in 4 the tumor followed in four to twelve weeks after the injury and in 1, immediately after. In most of these instances, the sarcoma developed in connection with the extremities.

Otto Hahn[2] describes a carcinoma of the previously healthy scalp, developing in a wound produced by a fall from a wagon. There resulted a wound which extended to the bone; suppuration and non-union followed, and in seven weeks the ulcerated area assumed distinct carcinomatous appearances and microscopic examination established the carcinomatous nature of the process.

Carola Maier[3] discusses the possibility of primary carcinomas in bone on the basis of an interesting instance in which the factor of a trauma also enters. There is described a primary flat-celled carcinoma in the interior of the ulna, developing after a definite trauma but without fracture or wound of the skin. Six months later an operation was made. The patient, 20 years old, has remained well for three years and there is as yet no evidence of any primary tumor elsewhere. Now, Cohnheim assumed that an embryonal matrix must exist; trauma favoring growth by producing congestion, while Ribbert and others believe that misplacement may occur in after life with or without preceding inflammatory proliferation of connective tissue. How did the epithelium in Maier's case get into the medullary spaces without fracture? Was there a fissure? Or an embryonal, misplaced matrix? At all events the rôle of trauma in the development of carcinoma and other tumors, though somewhat limited, can not be denied. Such cases as Hahn's, and also Maier's, are of great interest because of their practical importance with respect to questions of accident insurance.

### DISSEMINATION OF BACTERIA FROM THE MOUTH DURING SPEAKING, COUGHING, AND OTHERWISE.

The investigations of Flügge and his pupils and of others have shown that in speaking and coughing, droplets of mucus and saliva are expelled from the mouth and carried for some distance away from their source of origin. Such droplets have been found to carry bacteria with them. It is especially in connection with the dissemination of tubercle bacilli that this demonstration becomes of significance. Recently Koeniger[1] has published the results of extensive studies of bacterial dissemination by droplets from the mouth, using the bacillus prodigiosus in his tests because of its ready recognizability from the red pigmentation of its colonies. Persons would rinse their mouths and throats with suspensions of this bacillus and then, stepping into a specially arranged room, speak in more or less loud tones for varying periods, the disseminated bacilli falling on plates of culture-media disposed here and there throughout the room. In this way coughing, whistling and sneezing were studied as well as the special effects of repeating the various letters of the alphabet. Consonants—some more than others—were found to throw out bacteria in greater numbers than vowels. Koeniger establishes the fact that this mode of bacterial dissemination takes place over a much wider range of distance than claimed heretofore, the minute droplets or bubbles sailing far and wide through the atmosphere and alighting on all sides of the experimenters. The greatest distance to which bacteria were carried in these experiments was 12.40 meters.

The question now is: of what importance is droplet dissemination in the spread of infectious diseases? It would seem, as Koeniger states, that this depends largely on the number of pathogenic bacteria in the mouth. There can be no doubt that persons with pathogenic bacteria in their oropharyngeal cavities may become dangerous to their surroundings. We know that pneumococci and tubercle bacilli frequently occur in the secretions of the mouth; and diphtheria bacilli have been found in all parts of the mouth, not only during the active stages of the disease, but long after convalescence has set in (Neisser). Shaffer and others have demonstrated that lepers with lesions of the oral and nasal mucous membranes give off lepra bacilli in enormous numbers. Influenza, the pneumonic form of bubonic pest, whooping-cough, staphylococcus and streptococcus anginas, and infections of the respiratory tract in general are other examples in which dissemination of germs may take place. When the fluids of the mouth are densely populated with bacteria, a coughing spell, "yes even a few sharp words" would suffice to so contaminate the atmosphere of a medium-sized room that other persons would have a good chance to become infected.

As the possibility of this mode of spreading infectious diseases is so evident there are certain prophylactic measures that merit enforcement. The handkerchief should be held in front of the mouth when coughing, and this should be generally encouraged for use by the well as much as the sick. In case of tuberculosis and of plague a gauze mask for the mouth and nose has been recommended for the patient and also for the attendants. Disinfectant mouth-washes should be used, perhaps not always so much in the interests of the patient as for the welfare of those about him. Then steps should be taken to protect articles in the rooms exposed to infection by this method, which undoubtedly plays some rôle in wound infections. Sneezing disseminates microbes in the well as much as in many sick, and here the conscientious use of the handkerchief is specially indicated. Nurses and hospital attendants, by following the indications pointed out, may do much to protect themselves and others. As mentioned by Koeniger, the playing of a stream of water on an infected surface of the skin, for instance, is hardly a safe procedure in view of the foregoing statements.

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[2] Ibid., 591.
[3] Ibid., 553.
[1] Ztft. f. Hyg. u. Infektionskr., 1900, xxxiv, 119.

### BLAND AND THE "METROPOLITAN MEDICAL COLLEGE."

A Chicago paper, in reporting the trouble that the alleged "Metropolitan Medical College" is just now havng with the United States government,[1] mentioned one T. A. Bland as a member of the faculty. This called forth a reply from the individual, who states that he has never been a member of said faculty. As one T. A. Bland has been an active mover against any restrictive legislation in regard to quackery—lobbying in this and other sections against medical practice acts, etc.—the error was a natural one, since such work is directly in favor of establishments like the one that has just come to grief. The question arises, however, whether this denial is as complete as it is intended to appear, and whether the same person could or would deny any similar conection with the earlier discredited "Independent Medical College," which is represented at the present by its successor and equivalent—the "Metropolitan Medical College." If we are not mistaken, it formerly sent out circulars including one T. A. Bland in its faculty. Unless this connection can also be truthfully repudiated, the present denial looks like a mere quibble, and the said person should share the disgrace as well as the "honor" of connection with the concern now before the courts. In view of future possible lobby work and the interests of the so-called American Medical Union,[2] organized, as it appears, to fight legal restrictions of unqualified medical practice, this may be a matter of some importance.

### THE COCAIN HABIT.

The negroes in some parts of the South are reported as being addicted to a new form of vice—that of "cocain sniffing" or the "coke habit," as it appears to have this name also. A negro, it is said, will buy 5 cents' worth of cocain, which is sold in a little paper box for such purposes, and, taking it in the old-fashioned way of snuff-takers, proceed to indulge in a "coke drunk." The effects are described as much like those of an ordinary whisky drunk; some cocain "sniffers" are quarrelsome, some hilarious, some morose, and many are happy and indifferent like the opium smokers, while the intoxication lasts. It appears even that the habit is going to succeed to the recognized legal rights of whisky, as we read that one community licenses the sale, allowing, however, druggists to sell the alkaloid on physicians' prescriptions, but imposing heavy penalties on the doctor who prescribes it for other than patients requiring it medicinally. In this there is progress in a line not altogether encouraging. It is a pity that anything further in the way of intoxications should receive legal recognition. The world has heretofore got along without cocain exhilaration, and the necessity of it for the negroes of Kentucky, even could it be confined to them, can not be reasonably urged. The precedent is bad, and it is to be hoped the custom will not be followed elsewhere.

### DESQUAMATION IN THE COURSE OF TYPHOID FEVER.

Desquamation has been rarely observed in the course of typhoid fever, and then principally in children. It occurs either at the close of the febrile period, or a little later—ten days or two weeks after defervescence. In view of the rarity of its occurrence the report of six cases in adults reported by Remlinger[1] among 706 cases, is of especial interest. Perhaps if carefully looked for, the condition would be found more frequently than the references to the subject would indicate. All of the six cases were grave; the fever was prolonged beyond the usual limits, and convalescence was long and difficult. The desquamation appeared as the temperature commenced to fall. The scales were neither furfuraceous nor membraniform, but lamellated, and in character were intermediate between those of measles and those of scarlet fever. The process appeared earliest, and was most marked, on the lateral aspect of the chest and the abdomen, and, in general, was limited to the trunk, although in one case it extended to the extremities. In three instances it was associated with falling out of the hair. The period of occurrence, and the thinness of the lamella would seem to be in accord with the view that the desquamation is the result of a sudoral eruption, but this was not observed in degree sufficient to cause desquamation, which is itself rare, while in three other cases with sudamina, desquamation was not noted. The phenonomenon is considered atrophic and analogous with the falling out of the hair that at times takes place. It appears to be of favorable prognostic significance, indicating the advent of convalescence.

### THE BENEFICENT SPIDER.

Since the mosquito has been found out and we know that, while masquerading as a mere nuisance, she is a deadly enemy, it is well to take stock of our insect friends that are, in a measure, our protectors from her attacks. It is well known that the dragon-fly is an enemy to mosquitoes, but we have been apt to overlook another less attractive ally. Dr. O'Connell of the British Army calls attention to the usefulness of the despised or hated spider as a protector of mankind against the disease-bearing mosquito. The general opinion held by us of these fellow creatures of ours has been a distinctively unfavorable one. The late Grant Allen, who as a popularizer of natural history, can probably be accepted as a fair exponent of the prevalent views, while claiming for them a very high place among animals with jointed bodies, is quoted as describing them as "ferocious, cruel, blood-thirsty, shining examples of abandoned and shameless wickedness." It is the spider, however, who builds for us, unasked and unthanked, a web against the malarious mosquito. If only let alone, it would bar every passage. Its intellectual endowments—perhaps the highest among articulates—are such that it knows how to seize each point of advantage in its beneficent work. Morally, the spider is no worse than those human parasites, the dog and the "harmless necessary cat," but its appearance and manners are less attractive and for this reason therefore, it loses all the credit of, and advantage from, the good it does ungrateful mankind. It was a spider that saved a Bruce, but this one good deed is all that is recorded in history to its credit. The innumerable lives it may have saved from malignant mosquitoes and infection-bearing flies should be reckoned in its account.

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[1] THE JOURNAL, June 9, p. 1497. [2] THE JOURNAL.

[1] Revue de Médecine, 1900, No. 5, p. 365.

## ACUTE ANTERIOR POLIOMYELITIS IN AN ADULT DUE TO INFECTION.

There is accumulating evidence in favor of the view that acute anterior poliomyelitis is an infectious disease, though the actual demonstration of a causative microorganism has not yet been made. Apart from the sudden onset of the disorder, sometimes with convulsions, often with diarrhea, and its febrile course, the occasional epidemic distribution of the cases especially is indicative of a bacterial agency in the etiology. The disease is most common in children, occurs but rarely in adults and generally gives rise to flaccid, atrophic paralysis in one extremity, sometimes in both lower or both upper, and least commonly, in both the upper and the lower on the same side. A case where the disease occurred in an adult in hemiplegic distribution and was probably of infectious origin has recently been reported by Gumpertz.[1] The patient was a robust merchant, 23 years old, who, during an attack of what possibly was typhoid fever, but which may have been merely the febrile state associated with acute anterior poliomyelitis, was seized with flaccid paralysis, wasting, diminution in electric irritability and in the reflexes, but without sensory alteration, in the upper and the lower extremity upon one side of the body. It was suggested that the presence of a furuncle upon the left buttock near the vertebral column may have been responsible for the development and the localization of the spinal disorder, through embolism or metastasis.

## INFECTIOUS DISEASES AND EPILEPSY.

The relationship existing between infectious diseases and those of the nervous system is a very interesting problem, and has long been an object of close scrutiny. Although it is well known that infectious diseases have figured largely in the production of many nervous affections, such as the cerebral and spinal palsies of children, it is not so well understood that the influence of infectious processes on a previous existing mental or nervous disease has also been carefully considered by able investigators. Moreover, the subject is as old as medicine. In a painstaking review of the subject, Toulouse and Marchand[2] state that Hippocrates knew that intermittent fever could suspend epileptic attacks for a time, and many analogous facts have been known from the time of Portal. Seglas and Pelliasier recently wrote a thesis on the subject. Féré, the noted French epileptologist, has shown that even a boil or abscess, while in active formation, is able to modify the course of epilepsy. Some of our major affections which have suspended the epileptic paroxysms are erysipelas, typhoid fever, and pneumonia. Seglas and Pelliasier recorded seven cases of pneumonia, in six of which the epileptic attacks were suppressed entirely during the course of the pneumonia. The mechanism of the suspension of convulsive disorders during fever is still unsettled, some of the current theories are nevertheless very interesting; for instance Bourneville thinks that the fever offers a vicarious means of expenditure of energy, which under ordinary conditions is manifest in the epilepsy by means of the convulsions. Still others hold that the fever generates toxic substances in the blood, which induce the nervous system to inhibit expenditure of energy. In proof of the correctness of the latter theory it may be said that after the fever is passed the paroxysms are more frequent, thus apparently compensating for the temporary cessation of seizures during the fever. While in the sleep state, which is in many ways opposed to fever, the epileptic attacks are much more frequent, thus adding further evidence to the inhibition theory for the suspension of epileptic paroxysms in fevers. Toulouse and Marchand report one case in which diurnal attacks were changed to attacks every twelve days, by the intervention of erysipelas, while Pelliasier has collected no less than eighteen cases of similar remarkable improvement after occurrence of typhoid in epileptics. While there seems to be a diminution of epileptic attacks during the course of a complication of infectious diseases, the permanency of the benefit does not seem to be sufficiently lasting to warrant the establishment of an infectious disease as a new curative measure for epilepsy.

## THE SAN FRANCISCO PLAGUE SITUATION.

Dr. Kinyoun, of the Marine-Hospital Service, in the latest report of that bureau, notices the peculiar attitude of a portion of the San Francisco press, especially the misrepresentation in regard to himself as an authority for the statement that plague infection did not exist in that city. He says that, whatever may be the case at present, plague infection existed in the Chinese quarter on May 27, and would continue until a strong, determined and concerted effort was made to eradicate it. The policy in the course taken by some of the San Francisco papers is hard to understand; it certainly has not succeeded in convincing the public elsewhere that cases of the plague have not occurred there, but it has created a grave suspicion, that in its way is even worse than would be a candid admission of the fact. In the latter case, we would feel better assured that the efforts to restrict and exterminate the disease would succeed, and the country generally would feel easier. As it is, we have the evidence of the officials entrusted with the duty of watching our coasts—the marine-hospital surgeons—as well as of the local health authorities, that plague has existed there, if it does not now exist and no newspaper authority or even judicial decision will be accepted as outweighing this testimony. We know, moreover, that the plague often occurs sporadically before becoming epidemic—a fact that does not increase satisfaction with the present conditions of affairs. It would be most unfortunate if, through misguided public sentiment or legal interference with quarantine, the pest should gain a foothold on the Pacific coast.

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[1] Berliner Klin. Woch., 1900, No. 16, p. 349.

[2] Revue de Psychiatrie, 1899, p. 133.

## Medical News.

### ILLINOIS.

### Chicago.

At the commencement exercises of the Northwestern University, held June 14, the degree in medicine was conferred on eighty-three men and twenty-one women from the Woman's Medical School. Dr. Cyrus Northrup, president of the University of Minnesota, delivered the commencement address.

#### ANNUAL MEETING AND ELECTION.

The Chicago Medical Society held its forty-eighth annual meeting on June 20. Dr. Maurice H. Richardson, Professor of Surgery, Harvard Medical School, Boston, delivered the address upon the subject of "Surgery of the Gall-Bladder." After the president's address, on "Physiology and Pathology of Pregnancy and Hints on the Management of Labor," and the reports of the officers and committees, the annual election took place, with the following result: president, James H. Stowell; first vice-president, Alexander H. Ferguson; second vice-president, Adolph Gehrmann; secretary S. C. Plummer, Jr.; treasurer, Robert H. Harvey; trustees, Wm. H. Wilder, for the Ophthalmological Society; John Ridlon, for the Orthopedic Society, and E. J. Doering, for the Medicolegal Society.

#### WOMAN'S MEDICAL COLLEGE ALUMNAE.

The Alumnæ Asociation of the Northwestern University Woman's Medical School elected the following officers, at a meeting held June 15: president, Marian Kelley Bowles, Joliet; first vice-president, Hezekiah Crabtree, Chicago; second vice-president, Anna White Sage, Chicago; secretary, Eliza H. Root, Chicago; treasurer, Mary C. Hollister, Chicago; executive committee, Marie J. Mergler, Elizabeth Dunn, and Ida Schell, Chicago.

#### DINNER FOR DR. KEEN.

A Rush Faculty dinner was given at the Chicago Club on the evening of June 20, in honor of Dr. W. W. Keen, of Philadelphia, who delivered the commencement address before the faculty and students of Rush Medical College at the annual commencement, June 21. There were present Dr. Maurice H. Richardson, of Harvard, and the following from Chicago: Drs. Frank Billings, J. B. Herrick, J. Clarence Webster, N. Senn, Christian Fenger, John E. Owens, M. L. Harris, Arthur Dean Bevan, Daniel R. Brower, F. S. Coolidge, Harold N. Moyer, E. Fletcher Ingals, James Nevins Hyde, A. J. Ochsner, L. Hektoen, George H. Simmons, and President Harper, of the University of Chicago.

#### RUSH MEDICAL COLLEGE COMMENCEMENT.

The commencement of Rush Medical College took place on June 21, the exercises being held in Studebaker Hall. The Doctorate Address on "The Ideal Physician," was delivered by Dr. W. W. Keen, of Philadelphia, and is printed in this issue. A class of 210 was graduated, about 25 per cent. of whom had already received degrees from literary colleges. Dr. Frank Billings, Dean of the Faculty, conferred the degrees, The honor men were the following: Fellowship in pathology, Theodore Tieken, M.D.; fellowship in chemistry, Charles S. Wood, M.D.; fellowship in materia medica and pharmacology, Charles M. Schultz, M.D.; fellowship in medicine, Alexander F. Stevenson, M.D.; fellowship in surgery, Harry W. Horn, M.D. The E. L. Holmes prize and scholarship at Wood's Hall, Mass., was awarded to Martin H. Fischer, M.D.; the Benjamin Rush medal to Oscar H. Dahms, M.D.; the J. W. Freer medal to Frank M. Wood, Jr., of the class of 1901; the L. C. P. Freer medal to Frederick Greenbaum, of the class of 1902; the Daniel Brainard medal to Don H. Palmer, of the class of 1903, Frank M. Wood, Jr., receiving honorable mention; and the DeLaskie Miller prize to George W. McClure, M.D. The Alumni banquet was held on the same evening at the Auditorium Hotel.

### NEW YORK.

Dr. E. E. Webster, who has been practicing in Hornellsville for several years, has returned to Woodhull and resumed practice.

Dr Edward F. Brush, Mt. Vernon, gave a dinner at his home, June 14, to the directors of the Society of Medical Jurisprudence of New York, of which he was formerly president.

A large bronze memorial tablet of Dr. Cornelius N. Hoagland has been placed in the Hoagland laboratory, by the physicians of the Long Island College Hospital.

Dr. Lewis W. Rose, chief of the department of health and sanitarian at the state industrial school, Rochester, for six years past, has resigned on account of a rule just made, that the chief of that department shall reside in the institution and give up his whole time to the service.

#### NEW YORK COUNTY MEDICAL ASSOCIATION.

At the annual meting of this Society, held June 18, the following officers were elected: president, Parker Syms; first vice-president, J Riddle Goffe; second vice-president, Emil Mayer; recording secretary, Ogden C. Ludlow; corresponding secretary, J. W. Draper Maury; treasurer, Charles E. Denison, and member of the executive committee for three years, Frederick Holme Wiggin.

### NEW JERSEY.

The Medical Board of the Atlantic City Hospital has appointed Dr. Sylvester J. Goodman, of Philadelphia, resident physician for the ensuing year.

The third annual dinner of the Practitioners' Club, of Jersey City, was held June 12. Dr. J. A. Exton was chosen president, and Dr. W. Steadman, secretary and treasurer. The executive committe will remain as before: Drs. T. R. Chambers, G. K. Dickinson and F. D. Gray.

### PENNSYLVANIA.

At the commencement exercises of Dickinson College, Carlisle, the degree of LL.D. was conferred on Dr. L. S. Pilcher, of New York City, editor of the *Annals of Surgery*.

A severe epidemic of measles is spreading over Montgomery county and the majority of children in the primary grades are being kept from school on account of sickness.

### Philadelphia.

Dr. John Madison Taylor will spend the summer in Bar Harbor, Me.

Dr. J. H. Brinton tendered the class of '50, University of Pennsylvania, a banquet on the evening of June 13, at his residence, 1423 Spruce Street.

At the banquet of the class of 1890, held at the University Club, June 13, the following officers were elected: President, Dr. J. H. Wallace Rhein; secretary, Dr. H. S. Anders; treasurer, Dr. W. R. B. Harland.

During the past week another offender of the oleomargarin law was sentenced to the penitentiary for two months and fined $200 and costs. It is said that the State Dairy and Food Commission have a list of about one hundred persons, who will shortly be arrested for the same offense.

#### MORTALITY STATISTICS.

The number of deaths occurring in this city for the week ended June 16, was 455, an increase of 44 over the previous week, and an increase of 32 over the corresponding period of last year. The principal causes of death were: apoplexy, 17; cancer, 20; tuberculosis, 53; heart disease, 31; pneumonia, 33.

#### UNIVERSITY BANQUET.

The thirtieth annual banquet of the graduates of the University of Pennsylvania was held on the evening of June 12, and the following officers were elected: president, Dr. John Ashhurst, Jr.; vice-presidents, Drs. Horace Y. Evans, James Tyson, Charles K. Mills and Samuel D. Risley; secretary and treasurer, Dr. William S. Wadsworth. Dr. Samuel D. Risley was toast-master for the evening, and the principal addresses were made by Dr. E. W. Holmes and Col. A. A. Woodhull.

#### SANITARY SUGGESTIONS TO MOTHERS.

Some time ago the Philadelphia Obstetrical Society recommended to mothers certain rules, governing the care and management of infants during the summer months, such as proper food, time for bathing, methods of dressing, danger in certain drugs, etc. These have been found so useful that the chief of the Bureau of Health has ordered them published for distribution.

#### CHANGES IN PHILADELPHIA HOSPITAL.

For some time certain changes have been imminent at this institution. As has been mentioned in a previous issue of The Journal, Superintendent Lawrence resigned and his successor, William M. Geary, has been appointed. Dr. John V. Shoemaker has been added to the medical board, and certain other vacancies have been filled. Drs. Joseph Sailer and B. Franklin Stahl have been appointed medical registrars, and Dr. W. C. Pickett, neurologic registrar. Drs. Horace E. James and Edwin H. Miller have been appointed district physicians to the third and eighteenth wards, respectively.

#### ANTIVACCINATION SOCIETY.

The *Philadelphia Press*, of June 12, prints the following from a public speech made by Lawyer C. Oscar Beasley, the Pennsylvania representative of the Antivaccination Society: "I wish to say to this Court that I have proof in my possession, which I intend to present to the criminal branch of the administration of justice, that the very calves which are inoculated in some of the vaccin farms, after being kept for eight days, are carted away in the night and sold in the Philadelphia markets as fresh meat." It is said that two men have for some time been making investigations of certain farms, and that suits are to be entered at an early day. It is also stated that as soon as a vaccinated child dies, the Antivaccination Society will enter suit against the attending physician, and an attack in open court will then be made on the vaccin farms. In this connection it might be interesting to note that a trial has just been concluded in which the efficacy of vaccination has been reviewed by Mr. Beasley, who in his address to the court quoted Dr. W. M. Welch as one of his authorities who denied its efficacy. This was no sooner published than Dr. Welch immediately had printed an open letter in which he denied such a charge, and said further that statistics he had published from time to time "form a long chain of evidence in support of the protective power of vaccination against smallpox, that is simply incontrovertible, and no one knows this better than Mr. Beasley himself."

## MARYLAND.

Dr. Charles A. Wells, Hyattsville, has been unanimously indorsed by the Prince George County Convention as its candidate to represent the Fifth district in Congress. Dr. Wells, if nominated, will be a strong candidate, as he has practiced medicine in the district nearly forty years, and has many warm advocates in both political parties.

Dr. Louise D. Holmes, of the Woman's Medical College, Baltimore, has been elected assistant physician to the Springfield Asylum for the Insane at Sykesville. She will have charge of the large building for the female insane, to be opened July 1.

### Baltimore.

In the Baltimore Medical College, Dr. J. M. Rowland has been appointed professor of obstetrics, vice Dr. Wilmer Brinton, resigned; and Dr. J. W. Lord, associate professor of anatomy, vice Dr. J. M. Rowland.

As the result of the examinations held in May, the State Board of Medical Examiners has granted licenses to seventy-five candidates to practice medicine in this state.

Arnold Elzey Camp, United Confederate Veterans, elected Dr. George H. Eyster, surgeon, and Dr. W. R. McKuen, assistant surgeon.

#### MEDICAL DEPARTMENT OF JOHNS HOPKINS UNIVERSITY.

At the twenty-fourth commencement, held June 13, forty-three received diplomas, among whom were thirteen women. The graduates were presented by Dr. William H. Howell, professor of physiology; the degrees were conferred by Prof. Basil L. Gildersleeve, and Dr. Osler delivered the address. The following appointments have been made: Thomas S. Cullen and Wm. W. Russell, associate professors of gynecology; George P. Dryer, Ph.D., associate professor of physiology; Reid Hunt, Ph.D., associate professor of pharmacology; Norman McL. Harris, associate in bacteriology; Wm. G. MacCallum, associate in pathology; Percy M. Dawson, instructor in physiology; Charles P. Emerson, instructor in medicine; Eugene L. Opie, instructor in pathology; Merwin T. Sudler, Ph.D., instructor in anatomy; Wm. S. Baer, assistant in orthopedic surgery; Warren H. Lewis, assistant in anatomy; Frank W. Lynch, assistant in obstetrics; John B. McCallum, assistant in anatomy; Harry T. Marshall, assistant in pathology.

## OHIO.

### Columbus.

Dr. J. A. Burgoyne has been reappointed physician for the Institution for the Deaf.

Dr. F. F. Lawrence had the degree of doctor of science conferred on him by Baldwin University at the commencement exercises held recently.

### Cincinnati.

The Board of Trustees has added the following to the faculty of the medical department of the University of Cincinnati: William Muehlberg, demonstrator of physiology; Brooks Beebe, professor of nervous and mental disease; D. I. Wolfstein, professor of pathology.

The trustees of the Laura Memorial College have elected officers as follows: Alexander McDonald, president; Rev. H. M. Curtis, vice president; Richard Folsom, treasurer, and Rev. J. L. Taylor, secretary. Professor Norton resigned, and Drs. R. G. Boone and C. D. Todd were elected to fill vacancies. Dr. Elizabeth Campbell was elected to the chair of theory and practice, and Dr. William Muehlberg, professor of physiology.

## MICHIGAN.

Dr. R. S. Linn, Detroit, has been appointed an acting assistant-surgeon, U. S. A., with the rank of first lieutenant, and will go to the Philippines.

The medical library of the University of Michigan, through Dr. George Dock, has recently come into possession of a rare and valuable book—Laennec's work on Auscultation and Diseases of the Lungs and Heart.

## CALIFORNIA.

A hospital building for sick children is being erected at San Anselmo, on the grounds of the California Presbyterian Orphanage. The funds are furnished by the King's Daughters of the First Presbyterian Church of Oakland.

#### PLAGUE PRECAUTIONS.

To protect Southern California against the bubonic plague, Dr S. J. Quint has been appointed by the United States Marine-Hospital Service and stationed at Kern City to inspect all trains coming south. As a further precaution, in Los Angeles, the health officer is keeping a close watch over Chinatown, and has been empowered to take such action as he deems best to place it in a proper sanitary condition.

### Los Angeles.

A class of eighteen was graduated at the commencement exercises of the medical department of the University of Southern California, held June 12. Dr. W. LeMoyne Wills delivered the address in behalf of the faculty, taking as his subject, "A Better Preliminary Education for Medical Students."

#### MORTALITY STATISTICS.

The number of deaths for May were 146, equal to a rate of 17 per 1000. Contagious diseases reported during the month were: diphtheria, 8; scarlet fever, 16; typhoid fever, 11; measles, 434. There were 30 deaths from pulmonary consumption. On account of the time consumed in recording cases of a disease not usually serious, the Board of Health revoked the rule requiring the reporting of measles, and established a new order directing physicians to report all cases of tuberculosis.

## MINNESOTA.

The graduating exercises of the medical department of

Hamline University, Minneapolis, were held June 6. Eighteen received diplomas.

## INDIANA.

Dr. S. R. Cunningham, Indianapolis, has been appointed assistant surgeon of the Northern Indiana Hospital for the Insane, at Logansport.

## KANSAS.

A forty-acre tract of land between Pittsburg and Frontenac has been given to the coal miners of southeastern Kansas for hospital purposes by C. J. Devlin. A model building is to be erected, at a cost of about $12,000, most of the money being supplied by Mr. Devlin. The hospital will be in charge of the Sisters of St. Joseph, of Wichita.

### ABOLITION OF STATE BOARD OF HEALTH.

Dr. W. B. Swan, secretary of the State Board of Health, believes that the legislature would make a mistake if it abolished the Board and created, in its stead, the office of Health Commissioner. He said: "It has been done in several states, and always with unsatisfactory results. I believe it is best to leave it as it is. The members of the Kansas Board do not draw salaries, and their *per diem* and mileage once in three months amount to comparatively nothing. They come from the different parts of the state with a full knowledge of the health situation, and in a few hours' conference are prepared to act intelligently on the questions that may arise. Taking into consideration the importance of the Board of Health, I am sure that it is the most inexpensive department of the state government."

The conversation in which Dr. Swan thus expressed himself was brought about by a reference to a recent interview in which Governor Stanley stated that, if re-elected, he would recommend that the Board of Health be abolished and that the office of Health Commissioner be created in its stead. The governor's idea was that the Board was a useless body because it was not on the spot; that the secretary or commissioner, being present, always knew what was going on, and in cases of emergency could act promptly. The governor said that he had not been shown that the health board had ever been of any service to the secretary.

## AUSTRALIA.

### Sydney.

A case of exophthalmic goiter has been observed here which is of interest owing to the fact that the patient comes from a mountain town where the supply of water is from a clear stream. Nine other cases in the village seem to be similar to those reported from Switzerland. Good results in this case are being obtained from the use of galvanism, icebag to the heart, and hydrotherapeutic measures.

### THE PLAGUE.

The total number of cases to May 21, the date of this communication, is 240 and the total number of deaths 83. There were 23 new cases reported this week and the same number last week. There are 100 cases now under treatment. On account of the small number of cases developing among contacts the Medical Association has asked the Premier that they be not quarantined and he has given the Sydney Board of Health power to use their own discretion in the various cases. Among the Chinese eight new cases developed, seven of which proved fatal. Now, an inspection of every Chinese residence in Sydney and its suburbs has been ordered. Some of the islands are apparently imposing a strict quarantine against vessels from Sydney. The *John Williams*, a ship of the London Missionary Society left here for Rarotouga of the Cook Islands, but on her arrival there no communiation with the shore was permitted.

## CANADA.

### Toronto.

### ASSOCIATION FOR TREATMENT OF TUBERCULOSIS.

A number of medical men and many other prominent citizens assembled in the City Hall, June 13, pursuant to the resolutions adopted by the Ontario Medical Association, for the formation of a provincial society for the prevention and treatment of tuberculosis. Toronto was established as the headquarters of the Association, with Dr. James Thorburn as president and Dr. P. H. Bryce as secretary.

### VICTORIA HOSPITAL FOR SICK CHILDREN.

The following summaries show the operations of this hospital during the year: Under treatment Oct. 1, 1898, 94; admitted during the year, 576; discharged, 519; died, 42; under treatment Sept. 30, 1899, 109; total, 670, of whom 376 were males and 294 females. There were 27 cases of typhoid fever during the year. This week over 100 of these little patients were conveyed over to their summer home on Toronto Island, the Lakeside Home, built through the generosity of Mr. John Ross Robertson, M.P.

### TORONTO GENERAL HOSPITAL.

The number under treatment in all departments of this hospitals which includes the Burnside Lying-in Hospital and the Andrew Mercer Eye and Ear Infirmary, on Oct. 1, 1898, was 267; admitted during the year 1899, 286; births in the hospital, 135; total number under treatment, 3388; discharges, including infants, 2922; died, 206; under treatment Sept. 30, 1899, 260. Of the 3388 persons treated during the year, 176 males and 111 females were inmates of the Andrew Mercer Eye and Ear Infirmary, and 302 in the Burnside Lying-in Hospital. The latter number includes 76 male and 59 female children born in the institution. There were 150 cases of typhoid fever and three of puerperal fever present in the year. The total revenue amounted to $76,633.13.

### ONTARIO MEDICAL COUNCIL.

The thirty-fifth annual meeting of the Medical Council of the College of Physicians and Surgeons of Ontario has been in session here the past week. The election of officers resulted as as follows: president, Wm. Britton, Toronto; vice-president, W. W. Dickson, Pembroke; registrar, R. A. Pyne, Toronto (re-elected); treasurer, H. Wilberforce Aikens, Toronto (re-elected); solicitor, B. B. Osler, Q. C., Toronto (re-elected); auditor, James Carlyle, Toronto. Resolutions were introduced in regard to inter-provincial registration, and referred to a special committee for a report, which has not yet been presented. The property committee recommended that the medical Council building in Toronto should not now be offered for sale. The new prosecuting officer reported that in the seven months since he assumed office, 63 cases had been handled, and 30 convictions had been secured with an average cost of $2.38 each. The Council refused to appoint a delegate to the board of governors of the Victorian Order of Nurses, as they considered it outside its jurisdiction. Under the discussion of charges of unprofessional conduct in the profession, two cases were considered; one was allowed to go on suspended sentence; the other was stricken from the rolls, because it was shown that he had advertised certain cures for tuberculosis. The case of the local practitioner who was mixed up with a "cancer doctor," was instructed to be further investigated. The following will comprise the discipline committee for the next year: Dr. J. L. Bray, of Chatham; Dr. V. H. Moore, Brockville; and Dr. Cl. T. Campbell, London. The executive committee was elected as follows: Dr. Britton, Toronto; Dr. Henderson and Dr. Dickson.

### TORONTO UNIVERSITY.

The first annual meeting of the alumni association was held on the afternoon of June 12, the president, Dr. R. A. Reeve, dean of the medical faculty, presiding. Arrangements were made for the publication of a journal in the interests of the university, to be called. *The University of Toronto Monthly.* Dr. Reeve was re-elected president by acclamation. At the first alumni dinner in the evening four hundred were present. The chief speakers were Chief Justice Sir William R. Meredith, the new chancellor of the University, and Sir Charles Tupper, leader of the opposition in the Canadian House of Commons. The chancellor's address was listened to with the greatest attention, particularly that part relating to the trouble betwen the medical department and Trinity Medical College. He thought that, while the solution of these difficulties rested with the legislature of the province, the University would consider all complaints, carefully and wisely, but it would never agree of its own will, unles compelled by the Legislature, to surrender the medical faculty as a branch of its work. He declared in favor of the University of the Province being a state institution. In connection with this matter it is understood that Trinity Medical College has appointed a committee to wait on the Senate with regard to amalgamation of the two faculties. On the afternoon of June 14, the degrees in medicine, arts, etc., were conferred on forty-four. At the alumni meeting Dr. Reeve called the attention of the members to the fact that the graduates of Toronto University in all departments now numbered something like 10,000, and it would be important for them to discuss and consider in the interval before the next annual meeting, the question of parliamentary representation.

## PARIS LETTER.

### MEDICAL TRIPS TO WATERING PLACES.

Dr. Carron de la Carrière, former interne of the Paris hospitals, is at the head of a scientific movement, which consists in undertaking every year a journey to the principal mineral waters of France. Last year 97 medical men, among whom could be counted a certain number of foreigners, such as Ehlers of Copenhagen, Vaucleroy of Brussels, and Laache of Christiania, undertook this trip and visited Néris, La Bourboule, le Mont-Dore, St. Nectaire, Royat, Châtel-Guyon, Bourbon-l'Archambault, Bourbon-Lancy, St. Honoré, Pougues, the sanitarium of Durtol, and Vichy. Dr. Landouzy, who is professor of therapeutics at the Faculty of Medicine, was the scientific director of this excursion, and delivered lectures at each watering-place on its advantages, the qualities of the waters, the methods used, and the results obtained.

A similar excursion will be undertaken this year under the guidance of Dr. Landouzy, which will include the Southwestern bathing resorts: Bagnères de Suchon, Capvern, Bagnères de Bigorre, Argelès, Barèges, St. Sauveur, Cauterets, Eaux-Bonnes, Eaux-Chaudes, Saint Christan, Pau, Salies-de-Bearn, Biarritz, Cambo, Hendaye, Dax, Arcachon.

For American medical men in France for the exhibition this would not only be an easy way of acquiring information regarding these waters, but also an economical and delightful means of seeing one of the most beautiful parts of France, and the Pyrenees.

### RUBBER GLOVES IN SURGERY.

At the last meeting of the Society of Surgery a discussion was held on the use of gloves in operative surgery and the precautions necessary to ensure complete asepsis of the hands. Some surgeons declared that gloves were quite useless, while others maintained that they were a great element of security.

Another point discussed was whether a surgeon should operate when he has been in attendance on an infectious case during the preceding twenty-four hours.

Dr. Quénu, surgeon at the Cochin Hospital, referred to his last year's report, based on the statistics of this service during 1897 and 1898, and insisted on the following points: The patient should be bathed at least five or six times, and the last time, soap, alcohol and ether should be used. Rubber gloves should be worn, as complete asepsis is thereby obtained. They should, however, be used only in certain cases, such as operations on infected patients. When it is found necessary to do without them, on account of delicacy of touch needed during the operation, it will be found advantageous to put on sterilized gloves if one is obliged to operate soon after.

Dr. Quénu said that he used for his ligations rubber thread, as it was more easily sterilized than silk, was more compact, and stronger. Dr. Quénu's remarks brought forth some objections from Dr. Rochaud, who asked Dr. Quénu if he thought it wise for surgeons to visit dissecting-rooms. This was a veiled allusion to the fact that Dr. Quénu is chief of practical work at the dissecting-rooms belonging to the hospitals—the amphitheater of Clamart. Dr. Quénu answered that he did not consider the subjects used in dissecting work as very virulent, that the use of gloves while dissecting was sufficient protection, and that the chief of a surgical service should never attend autopsies. The discussion was taken up two weeks later by Dr. Bazy, who told the Society that, after having put his fingers into various virulent cultures, and washed his hands with the greatest care, he had performed laparotomy on four rabbits, and had handled their intestines. The rabbits, which he showed, made a speedy recovery. Four other rabbits were treated in like manner, without any antiseptic precautions being taken, and they all died in a few hours.

### MASSAGE OF THE HEART IN SYNCOPE.

Dr. Bazy, who has a wide reputation as a genito-urinary specialist, is a plain-spoken man, and does not believe in complicating operations too much. When Dr. Tuffier described his method of massage of the heart in syncope, during the administration of chloroform, and indicated how the incision should be made to uncover the heart, Dr. Bazy said: "Gentlemen, I have seen this operation carried out, and it was something awful to behold—*c'était effrayant.*

### MEDICAL EXHIBIT AT THE EXPOSITION.

The Assistance Publique, as it is called in Paris, i. e., the organization which sees to the care and sustenance of the sick and the poor, is the largest and most important body of its kind in the world. Its exhibit is in the Pavilion of the City of Paris, and is on the whole rather disappointing. Foreign physicians can best see the working of the hospitals by visiting the new wards opened in the Cochin and Enfants Malades Hospitals, or by inspecting the Boucicaut Hospital, which is the finest of its type in France. Among some rather dry material of the exhibit, such as graphic charts of infectious diseases, increase in the number of patients, etc., there are two relics of former times which will excite the interest of everyone. One is an old four-posted bed, in use at the Hôtel Dieu during the eighteenth century, which was sometimes used for four patients. Wax effigies represent the patients lying in bed, three of them being stretched out, and a fourth warming himself beside a brazier. The bed is covered with a species of canopy surrounded with red cloth curtains, and there is a green baize coverlet over the bed. On the other side of the room is shown the new style of iron bed, with iron and porcelain night-table, glass spittoon, and all the different modern articles in use in a hospital.

In the next room is the representation of the hole in the wall through which foundlings were passed into the Foundling's Hospital, or Hôpital des Enfants Assistés. This large opening was furnished with a cradle turning in a sort of large box. The woman who wished to abandon her child put it in the cradle, rang the bell, and the watchman inside the building made the box revolve on its pivot and took out the child. This is what was called in olden times a "tour," and was in use up to 1850. Since that time children are registered at a special office. Surgical instruments are also exhibited; some of which date from the time of Dupuytren.

### SMALLPOX AT LYONS.

Lyons has been having a rather severe epidemic of variola, to judge from the statistics furnished. From February 16 till April 30, there were 308 cases of smallpox with 66 deaths. As there were 12 deaths among patients outside the hospitals, this makes an average of 9 deaths a week. Since the beginning of May here has been an increase in the disease, as 77 new cases were reported from the 2d to the 9th of May.

### HEALTH OF PARIS.

In Paris there seems to be very few cases of smallpox and the general health of the city has remained quite satisfactory. This condition of the public health is of great importance, on account of the exhibition, as any rumor of an outbreak of plague or smallpox would precipitate a financial disaster.

## Correspondence.

### Hypothetical Questions in a Suit for Malpractice.

Toledo, Ohio, June 8, 1900.

*To the Editor:*—Recently in this city, in a malpractice suit, the following questions were asked:

Assuming that upon a surgical operation, through the usual incision for appendicitis, a surgeon finds the appendix normal, and the condition of the surrounding parts so satisfactory that he returns the appendix to its former position, and permanently closes the incision without drainage, by through-and-through silk-worm gut sutures, reinforced by buried kangaroo tendons, through the peritoneal parts, and immediately thereafter makes an incision in the median line, and removes a ruptured tubal pregnancy, leaving the surrounding parts in such condition that he permanently closes the latter incision without drainage, with through-and-through silk-worm gut sutures, reinforced by buried kangaroo tendons, through the peritoneal parts, and within ten days thereafter, preceded by great abdominal pains, pus forces its way through the first incision in such quantities that a cotton pad one inch thick, by eight inches square, is to half its extent, twice a day saturated thereby, and such pus, without diminution, continues to discharge for the period of ninety days, to what would you, as a physician and surgeon, attribute the origin of such pus?

What would you do under such circumstances?

If the same conditions continued for four months, to what would you attribute the origin of such pus? What would you do, etc.?

If the same conditions existed for six months, to what would you attribute the origin of said pus? What would you do, etc.?

If the same conditions existed for nine months, to what would you attribute the origin of said pus? What would you do, etc.?

If the same conditions existed for twelve months, to what would you attribute the origin of said pus? What would you do, etc.?

If, after eighteen (18) months, the same conditions, having continued to exist, the said first incision being opened up, and there should be found in the abdominal cavity, a cheese-cloth sponge, composed of eight layers of cheese-cloth 2½x3 inches in size, saturated by pus, and the same had been in said cavity from the time of the first incision, to what would you attribute the origin of said pus, so discharging during said eighteen months?

The grounds for the suit as alleged by the plaintiff are sufficiently well outlined by the questions. The legal points which the plaintiff undertook to prove were lack of ordinary care and skill in making the operation, and inattention, neglect, and lack of ordinary skill in the care of the patient after the operation.

Medical experts were examined on the steps of an ordinarily skilful operation, the amount of pus which an infected kangaroo tendon would or could cause to be secreted but the question which caused experts the most trouble, was to fix a time after an operation where, if conditions as mentioned in the hypothetical question had supervened, they would cease to wait for nature to right the trouble, and whey would seek to do so by surgical means. The examination of one expert elicited the fact that he himself had in one instance waited for six years for nature to discharge a suture which he had introduced during the operation. Only the experts for the plaintiff were heard, as at the close of the plaintiff's evidence the defendant moved to dismiss the case because the statute limitation had expired before the proceeding had been begun, and the court so held.

One of the most powerful influences, because the most subtle, which leads to the physician's decision in such a case is a purely psychologic one, and one which he ought always to be on the lookout for. There can be no question that a physician will, with less personal disquiet, invoke surgical influences in such a case as the above, if it be referred to him, than in a case of his own. And where a physician's desire is strong in a given direction, it is astonishing how that desire will cover up unwelcome symptoms, and how it will exaggerate the diagnostic and prognostic value of intercurrent and unimportant ones.

The case is to be carried up on error.

James L. Tracy.

## Value of the Medical Visit.

St. Louis, June 14, 1900.

*To the Editor:*—The following is one of many letters which I have received since the publication of my communication on "The Value of the Medical Visit" in The Journal of June 2. (p. 1430):

Toledo, June 7, 1900.

C. H. Hughes, M.D.:
St. Louis, Mo.:

*My Dear Doctor:*—Kindly tell me if you ever knew a physician who did or could carry into practice the very truthful propositions of what ought to be done, as outlined in your letter in The Journal.

I believe it is a fact that, in this city, a recent graduate is more likely to demand a good fee than is the man whose long experience should entitle him to it, and I think that the universal practice is to charge one price for a visit.

Respectfully, ———.

Replying to this and many other letters, I would say that I always estimate a visit according to what I do for the patient; according to the time spent with him and lost from my office or hours of study and investigation; according to the time passed since I graduated; according to the ability or non-ability to compensate for full value of service; according to special manipulative and technical skill demanded and the value of advice given, as growing out of the facts learned and the skill and experience possessed.

For all to charge one price for a visit is to rob experience of its due value, and younger medical men of legitimate opportunity in practice. C. H. Hughes, M.D.

## Medical Transactions.

Hartford, Conn., June 16, 1900.

*To the Editor:*—Volumes of transactions of medical societies are very often disappointing to the reader. It is a question whether the publication of such volumes has more than a mere local interest. The criticism often made of the papers of the American Medical Association is that they have only a personal and local interest, and rarely rise to the height of being real contributions to the literature of the subject. This was true in some cases years ago, but there has been a gradual and well-marked improvement since The Journal began to publish these papers. Each year's transactions show a larger proportion of well-rounded, thoroughly-studied papers, and this is the secret of the increasing respect which the Association is receiving in all quarters. State and local associations, whose published volumes of transactions are increasing rapidly year after year, have a local interest which should be encouraged. While many of them are but little above the ordinary journal in their ephemeral character, their value undoubtedly is more to the author than to the reader. As studies of psychology and the growth of medical thought and practice, they are excedingly interesting.

A study of the transactions of different states is very interesting and is probably on a par with the sermons of the divines of a hundred years ago. Papers read in these local and state societies, when confined to epidemics and discussion of local conditions falling under the observation of the author, have great value, but when the author goes out into the field of medicine, discusses larger topics and draws weighty conclusions concerning scientific theories and movements, the value of his contribution is lost. The most valuable papers ever presented to the American Medical Association were local personal studies of diseases and methods of treatment which the author had discovered and tested in his experience. If they were extreme and unsupported by other deductions, or contrary to the present experience, the test of time always brought them into prominence or forgetfulness. An author who gives his personal experience, with the facts on which it is based, no matter what transactions it may be published in, is sure of recognition if his conclusions are correct.

The value of these local transactions is more largely in the culture and practice which it brings to the author in putting his ideas into print. Until recently papers of this class were almost the only biographical data which could be found regarding physicians at death. A recent critic has very severely commented on the uselessness of many of these volumes of state and society transactions. This is only partially true, for while it may have only slight value outside of the vicinity, it certainly is worth the publication and the effort to perpetuate it. The same critic has found in volumes of transactions of societies of specialists a dreary waste of words and unfounded theories. This is also an error, although some articles written by specialists abound in technical terms in such a profusion as to indicate darkening counsel with words. A few text-books are marred by this defect. The reader is obliged to get down a modern dictionary to follow the author.

and when, with great labor, he has discovered the meaning, it is trivial and unimportant.

The literature of medicine has attained such proportions that it attracts an army of writers who seek to appear on the printed page rather than to become instructors or teachers of new facts. Our ASSOCIATION meetings are gradually drawing the lines, trying to eliminate writers who have nothing to say and writers who serve up old theories without the flavor of novelty or personality. This is being accomplished in the Sections very largely. Better papers are called for, and shorter time is given, forcing the writer to condense what he has to say, to the great satisfaction of the listener. At the International Congresses at Moscow, and elsewhere, this great defect of inferior papers bids fair to destroy their usefulness. At Paris an effort will be made to check this in some measure, but the difficulty is very great. Large numbers of men will insist on reading papers that contain no new facts, to the disgust of those who have real contributions. At the meeting at Atlantic City, the officers of several sections made strenuous efforts to raise the grade of the papers offered and to keep out old discussions of common-place subjects unless by men of acknowledged ability. Authors of papers should never forget that the scope of the AMERICAN MEDICAL ASSOCIATION is far broader than that of little sectional gatherings.

Through the columns ofTHE JOURNAL, papers come before thousands of the best men in the profession, and unless these authors have something to say and say it briefly and clearly, their efforts will be unnoticed. In a local medical society or in a state society the personality of essayists will attract readers and attention, and the transactions in which these papers are published will keep up a personal interest not noticed otherwise. It is an error to suppose that a paper which is praised at the local society will receive equal praise when brought before the general profession. Many a man has become disgusted at not receiving the attention for his contribution before the AMERICAN MEDICAL ASSOCIATION which was granted to him by his local society, and has attributed it to jealously and ring rule. Many of the bitter enemies of our ASSOCIATION have become deluded with this idea and have become bitter detractors. Notwithstanding this, the ASSOCIATION goes on, aiming to be national in its efforts and work, and broad and catholic in its recognition of scientific facts everywhere. The seeker for mutual admiration and the mutual admiration society should confine his efforts to his local society and live in its transactions. T. D. CROTHERS, M.D.

# Book Notices.

DISEASES OF THE GALL-BLADDER AND BILE-DUCTS, INCLUDING GALL-STONES. By A. W. Mayo Robson, F.R.C.S., Senior Surgeon to the General Infirmary at Leeds, assisted by Farquhar Macrae, M.B., C.M. (Glas.). Second Edition. Cloth. Pp. 313. Price, $3. New York: William Wood & Co. 1900.

This second edition of Mayo Robson's lectures on "Diseases of the Gall-Bladder and Bile-Ducts" contains, in addition to the former contents, chapters on Membranous Cholecystitis and on Gall-Stones, and numerous additions thoroughout the text. The cases have been classified, instead of being all grouped together at the end of the work, of which they take up about one-fourth or one-third in tabulated form. The series illustrates the advance that has been made in the surgery of this region, and the much more favorable results of late years.

DISEASES OF THE NOSE AND THROAT. By J. Price-Brown, M.B., L.R.C.P.E., Member of the College of Physicians and Surgeons of Ontario; Laryngologist to the Toronto Western Hospital; Laryngologist to the Protestant Orphans' Home; Fellow of the American Laryngological, Rhinological, and Otological Society; Member of the British Medical Association, the Pan-American Medical Congress, the Canadian Medical Association, the Ontario Medical Association, Etc. Illustrated with 159 Engavings, including 6 Full-Page Color-plates and 9 Color-cutes in the text. Cloth. Pp. 470. Price, $3.50. Philadelphia: The F. A. Davis Co. 1900.

This handsome volume, by a prominent Canadian physician, is a very valuable addition to the literature of diseases of the nose and throat. The author has given the results of his experience, as a specialist and general practitioner, with these affections, in a practical way that can not but be of value to the student and practicing physician. Certain subjects which are generally included are omitted, for reasons stated by the author in his preface. Aural affections, for example, which are usually included with diseases of the nose and throat, are only incidentally touched upon, and the subject of diphtheria is entirely left aside. The only omissions, however, which might have been better avoided are some slight ones in regard to special points, such, for example, as the use of suprarenal extract, which certainly has a place in works on nose and throat diseases, but which we do not here find alluded to. It it not a work to post a person fully on the subject if we give it its usual limits, but so far as it goes it is a most valuable addition to the literature.

THE IRRIGATION TREATMENT OF GONORRHEA: ITS LOCAL COMPLICATIONS AND SEQUELÆ. By Ferd C. Valentine, M.D., Professor of Genito-Urinary Diseases, New York School of Medicine. Illustrated by fifty-seven engravings. Cloth. Pp. 221, Price, $2. New York: William Wood & Co. 1900.

The object of this work, according to the author's statement at the close, is to "place before those physicians who may not be thoroughly familiar therewith:

1. The rationale and technique of irrigations in acute gonorrhea.
2. The advantages of dilatations and irrigations in chronic gonorrhea.
3. The dangers of uncured gonorrhea, and the means of locating the foci of the disease, especially after its external manifestations have subsided.
4. To urge physicians to use their influence for the dissemination of a better understanding of the disease.

Comparatively few text-books treat of this special therapeutic method in this disease, the importance of which has only of late been fully appreciated. As the book is intended for the general practitioner, to whom it is dedicated by the author, it will, without doubt, fill a very useful place in medical literature. It is clearly written, very fully illustrated, and covers the subject in an exhaustive way. We trust the general practitioner will appreciate and utilize it.

HOME NURSING. MODERN SCIENTIFIC METHODS FOR THE CARE OF THE SICK. By Eveleen Harrison. Cloth. Pp. 325. Price, $1. New York: The Macmillan Co. London: Macmillan & Co., Ltd. 1900.

This little work contains a description of the general principles and methods of nursing as applied to the home care of the sick, and, therefore, ought to serve a very useful purpose. There are many cases, as the author says, where the trained nurse is not really required, and many others where the expense is an unsurmountable bar to her employment, and it is for such cases as these that the book is designed. So far as we can see, it contains a very valuable amount of information excellently given, and can not help but be of service. There are one or two cases where we might take exception. It is possible that some of the directions in regard to poisoning are too general. In the main, however, the author is safe in her recommendations, and the book can be most heartily indorsed, as a whole, for the purpose for which it is intended.

SERUMTHERAPY. Published by the Scientific Department of Frederick Stearns & Co., Detroit, Mich.

This brochure of fifty pages contains matter of interest regarding serumtherapy, how antitoxin serums are produced, directions for the collection and transmission of specimens of sputum, etc., for bacteriologic examinations, and other valuable information.

ANESTHETICS: THEIR USES AND ADMINISTRATION. By Dudley Wilmot Buxton, M.D., B.S., Member of the Royal College of Physicians. Third Edition. Cloth. Pp. 320. Price, $1.50. London: H. K. Lewis. Philadelphia: P. Blakiston's Son & Co. 1900.

This volume is the third edition of a comparatively well-known English work, which has been out of print some time, revised and brought up to date. The main additions are descriptions of methods of giving nitrous oxid in combination with oxygen, ether in combination with oxygen, Dr. Flux's open method of giving nitrous oxid, Schleich's methods of local and general anesthesia, and Bier's method of intrathecal cocainization, but which should be more properly credited to Corning, our own countryman. The methods also for prolonging anesthesia under nitrous oxid are noticed. For a convenient manual on the general subject, it will serve a useful purpose.

## Deaths and Obituaries.

### RESOLUTIONS ON DEATH OF DR. MILLER.

The following resolutions on the death of Dr. Truman W. Miller, which was noticed in The Journal, June 2, were passed by the Association at its recent meeting:

Whereas, On the eve of this annual meeting, Dr. Truman W. Miller, vice-president of the Board of Trustees, departed this life; and

Whereas, During his many years of membership and office in this Association, Dr. Miller had by his force of character his business ability and his untiring energy rendered valuable services to it; and

Whereas, During his long career in the practice of medicine, covering thirty-seven years, and reaching from the Civil War, in which he served as surgeon, until a few months ago, when he was stricken by his final illness, he had occupied a front rank in our profession, particularly as an educator and as a friend and counselor of younger members; and

Whereas, By his personal traits of character, his integrity, his good-heartedness and his readiness to help and advise, he had endeared himself to all who knew him; therefore be it

*Resolved*, That the American Medical Association deeply deplores his loss to the medical profession and to itself, and extends to his family its sincere sympathy and condolence.

William Pierson, M.D., New York University, 1852, died at his home in Orange, N. J., June 12. He was born Nov. 20, 1830, and was the eldest son of Dr. William Pierson, whose name was long prominent in the medical annals of his state. He was secretary of the New Jersey State Medical Society for thirty years, afterward its vice-president for an extended term, and at the recent annual meeting in Atlantic City was elected its president. He was the attending physician to the St. Michael's and St. Barnabas' hospitals and medical director of the Orange Memorial Hospital.

Raphael Edmonston, M.D., died in Manila, June 5, aged 27 years. He was graduated from the medical department of the Georgetown University in 1897, and during the Spanish-American War received an appointment of assistant-surgeon. In February, 1899, he was ordered to the Philippines, where he was engaged throughout the Luzon campaign.

Eldridge K. Leonard, M.D., licentiate of the Connecticut Medical Society, of which body he was also a member, died at his home in Rockville, Conn., June 13, aged 69 years. Dr. Leonard assisted the late Dr. Storrs, of Hartford, Conn., in an operation two weeks previously and contracted septicemia. The case was a hepatic abscess.

Geo. H. Trebel, M.D., Hamilton, Ind., died June 9, aged 35 years. He was graduated from Capital University in Columbus, Ohio, also from Miami Medical College in Cincinnati. He had since practiced in Hamilton, with the exception of one year spent in study in Germany and France.

J. Harris Oxner, M.D., died in Rome, N. Y., June 8, aged 58 years. He was graduated from the medical department of the University of Michigan in the class of 1880, and had since practiced in Rome.

William B. Ribble, M.D., Berkshire Medical College, Mass., class of 1849, died from cerebral apoplexy at his home in East Millstone, N. J., June 10. He was over 75 years of age, and was well-known as an active practitioner.

George M. Beakes, M.D., Albany, 1856, died of paralysis at his home in Bloomingburg, N. Y., June 16. He served during the Civil War as a surgeon of the Fifty-sixth N. Y. Vol. Infantry.

Joseph Bejach, M.D., assistant physician in the St. Louis Hospital, died June 9. He was a graduate of the medical department of Washington University, class of 1899.

Edward Maris, M.D., Jefferson Medical College, 1856, died at his home in Philadelphia, June 13, aged 68 years.

J. E. Kimball, M.D., died in Nashua, N. H., June 8, aged 41 years. He was graduated from the medical department of the University of Vermont in 1886.

## Miscellany.

**The Abortive Treatment of Suppuration of the Eyeball.**—In the treatment of suppuration of the eyeball from various causes, Snell (*The Lancet*, March 31, 1900, p. 925), after the administration of ether, divides the cornea with a cataract-knife or with Beer's knife, unless it is already destroyed. He then removes the remains of the cornea up to the sclera with scissors. The remaining contents of the globe of the eye are extracted with forceps, and the interior of the globe is cleansed with Mules' scoop, or cotton-wool and forceps may be employed to wipe out the contents. Finally, sublimate solution is freely syringed into the cavity of the eye until all of the contents have been removed or washed away, and only the bared sclerotic remains. Gauze is lightly packed into the eyeball and a bandaged is applied. The dressings are changed on the night after the operation, and during the next few days the eye is syringed twice a day and the gauze reapplied.

### NEW PATENTS.

Patents of interest to Physicians, June 5 and 12.

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| 650,822. | Ligature tier. Milton Cain, Jarbolo, Kan. |
| 650,933. | Disinfectant composition. Eugene Fournier, Paris, France. |
| 651,310. | Bed or douche pan. Daniel Hogan, New York City. |
| 651,047. | Sprayer or atomizer. Clinton H. Leggett, New York City. |
| 651,048. | Sprayer or atomizer. Clinton H. Leggett, New York City. |
| 651,150. | Vaporizer. James H. Valentine, Chatham, N. J. |
| 651,061. | Diamidonaphthol. Arthur Weinberg, Frankfort-on-the-Main, Germany. |
| 32,788. | Design. Bed pan. Daniel Hogan, New York City. |
| 651,777. | Electrotherapeutic apparatus. Fred H. Brown, Chicago. |
| 651,346. | Making cyanids. August Dziuk, Hanover, Germany. |
| 651,605. | Hospital buggy. Louis E. Hoffman, Cleveland, Ohio. |
| 651,761. | Device for lifting and moving the sick. Charles W. Jones, Grand Rapids, Mich. |
| 651,717. | Apparatus for concentrating sulphuric acid. Jacques L. Kessler, Clermont-Ferrand, France. |
| 651,738. | Invalid's bed. Samuel Nicholls, Sr., Kenesaw, Neb. |
| 651,470. | Speculum. Charles J. Philling, Lansdowne, Pa. |
| 651,472. | Electrical appliance for the cure of deafness. Wm. J. Tindall, New York City. |

### CHANGE OF ADDRESS.

Dr. A. L. Anderson, from 912 Walnut St. to Rookery Bldg., Kansas City, Mo.

Dr. F. F. Bryan, from Newberry Hotel, Chicago, to Georgetown, Ky.

Dr. C. Bell, from Charlottesville, Va., to 1909 G St. N. W., Washington, D. C.

Dr. C. Zimmer Corns, from Delmar to Sheffield, Ala.

Dr. J. A. Corn, from Clifton, Kan., to City Hospital, Kansas City, Mo.

Dr. C. J. Carson, from 2400 Dearborn St., Chicago, to Marten Blk., Marshall, Mich.

Dr. H. B. Citron, from 56 E. 3d St., New York City, to 80 Columbia St., W. New Brighton, N. Y.

Dr. G. N. Drysdale, from Crescent City to Yreka, Cal.

Dr. R. J. Danner, from Louisville, Ky., to Elnora, Ind.

Dr. H. M. Farney, from Shukert Bldg. to 3814 Windsor St., Kansas City, Mo.

Dr. O. A. Fliesburg, from Minneapolis to North Branch, Minn.

Dr. L. G. Frankenthal, from 3236 Michigan Ave. to 48th and Kimbark Ave., Chicago.

Dr. B. Getzlaff, from 126 Division St., Benton Harbor, Mich., to 368 Larrabee St., Chicago.

Dr. M. D. Gibbs, from Victor to Altman, Colo.

Dr. E. M. Hurst, from Mt. Meridian to Cloverdale, Ind.

Dr. M. O. Heckard, from 1251 to 1276 W. Madison St., Chicago.

Dr. H. P. Howard, from Alexandria to Burkes Garden, Va.

Dr. E. M. Holmes, from Readyville to Bradyville, Tenn.

Dr. W. S. Hamilton, from Chicago, Ill., to Norman, O. T.

Dr. H. S. Herr, from 1195 Pearl St. to 57 Marvin Ave., Cleveland, Ohio.

Dr. P. H. Irish, from Minneapolis to Brainerd, Minn.

Dr. E. A. Irwin, from Chicago, Ill., to Boulder, Mont.

Dr. G. P. Kerrigan, from 358 Ogden Ave. to 241 S. Hoyne Ave., Chicago.

Dr. H. C. Johnson, from 2601 Calumet Ave., Chicago, Ill., to 13 6th St., Fond du Lac, Wis.

Dr. J. A. Jeffries, Jr., from Charlottesville to Warrenton, Va.

Dr. W. A. Logan, from Louisville, Ky., to Bryan, Ala.

Dr. W. E. Brown, from Coolville, Ohio, to Taylorsville, Ill.

Dr. A. Lukens, from 1068 Lexington St., New York, to Pelham, N. Y.

Dr. S. J. Liebman, from 222 E. Broadway to 660 E. 173d St., New York City.

Dr. J. F. Liken, from 2302 Cherry St. to 424 Melrose Ave., Toledo, Ohio.

Dr. T. W. Morgan, from 41 Laflin St., Chicago, to Dawson, Ill.

Dr. J. H. Miller, from 1901 Jefferson St., Baltimore, Md., to Pana, Ill.

Dr. L. MacKenzie, from 143 Robert St., Toronto, Canada, to Dwight, Ill.

Dr. G. W. Mahoney, from Venetian Bldg. to Room 306, 100 State St., Chicago.

Dr. T. S. K. Morton, from Philadelphia, Pa., to Honnedaga, N. Y.

Dr. C. S. Maxwell, from Kenansville to Mt. Olive, N. C.

Dr. E. L. McCrea, from Lamar, Mo., to Table Rock, Neb.

Dr. J. B. Mears, from Charlottesville to Keller, Va.

Dr. H. C. Miller, from Detroit, Mich., to Gibbs Blk., Findlay, O.

Dr. F. E. North, from Chattanooga, Tenn., to Cal. Woman's Hospital, San Francisco, Cal.

Dr. G. W. Nihart, from Mendon to Petoskey, Mich.

Dr. H. Nichell, from 80 Sycamore St. to 27 Days Park, Buffalo, N. Y.

Dr. C. A. O'Quinn, from Dupont to Mayday, Ga.

Dr. E. D. Powell, from Winona to Elliott, Miss.

Dr. J. N. Rape, from Tchula to Moss Point, Miss.

Dr. F. D. Reames, from Portland to Klamath Falls, Ore.

Dr. T. J. Stiver, from 1640 Wilson St. to Masonic Temple, Denver, Colo.

Dr. G. T. Spearman, from Hamilton to Leon Junction, Texas.

Dr. J. W. Shaffer, from Sandusky, Ohio, to Cartwright, Pa.

Dr. W. H. Valentine, from Minneapolis to Tracy, Minn.

Dr. O. J. Westlake from 408 E. 12th St. to 1010 Main St., Kansas City, Mo.

# Queries and Minor Notes.

### REQUIREMENTS FOR PRACTICE IN NEW JERSEY.

Elmira, N. J., June 14, 1900.

*To the Editor:*—Will you kindly inform me regarding the requirements for the practice of medicine in the State of New Jersey?

M. C. B.

Answer:—The requirements in New Jersey are: 1. Evidence that the applicant is over 21. 2. Certificate of moral character from at least two physicians in good standing, one a resident of the State. 3. Graduation from a reputable literary or scientific college, high school, or academy, or a preliminary examination covering the subjects required by the board. The certificate of academic education must accompany the application. 4. A diploma from a legally incorporated medical college recognized in good standing by the board at the time of issue of the diploma in the United States, or a diploma conferring a full right to practice in all branches in some foreign country, and evidence that the applicant has studied medicine four years, including three courses of lectures in different years in a legally incorporated foreign or American medical college prior to granting of said diploma. 5. Examination by board of medical examiners which is given the third Tuesday and Wednesday of June and September of each year. The application for blank forms should be made to the secretary of the board, Dr. E. L. B. Godfrey, Camden, N. J.

### LAWS GOVERNING THE PRACTICE OF MEDICINE.

Grand Rapids, O., June 12, 1900.

*To the Editor:*—Will you please tell me where I can find the laws governing the practice of medicine in the different states? I especially wish to know the law governing the practice in the States of California and Utah. Respectfully, C. B. C.

Answer:—The latest full statement of the requirements for practice in the states is in the report of the Illinois State Board of Health for 1898. To practice in California a diploma from a regular medical college in good standing is required. It should be forwarded to the board of examiners, of which C. C. Wadsworth, 1104 Van Ness Ave., San Francisco, is the secretary. The fee is $5. At the present time three full courses of lectures are required of the applicant before receiving a diploma. In Utah, both the diploma and an examination by the board of examiners are required. Examinations are held in Salt Lake City on the first Monday of January, July and October. The secretary of the board of examiners is Dr. Briant Stringham, Salt Lake City.

# The Public Service.

### ARMY CHANGES.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., June 2 to 6, 1900, inclusive:

Edward T. Comegys, major and surgeon, U. S. A., leave of absence granted.

Michael E. Hughes, acting asst.-surgeon, relieved from duty in the Department of Porto Rico; at the end of his present leave of absence he will proceed from Adams, Mass., for duty in the Department of California.

Frank R. Keefer, major and surgeon, U. S. V., from San Francisco, Cal., to Washington, D. C., reporting for instructions to the surgeon-general.

James P. Kimball, lieut.-col., deputy surgeon-general, U. S. A., leave of absence granted.

Ben' H. Metcalf, acting asst.-surgeon, from Winthrop, Mass., to duty at Fort Banks, Mass.

Samuel O. L. Potter, major and surgeon, U. S. V., now at San Francisco, Cal., to temporary duty in the Department of California.

Elmer A. Scherrer, acting asst.-surgeon, leave of absence from the Department of California extended.

Rodney D. Smith, acting asst.-surgeon, from Blooomington, Ind., to the Department of California.

Samuel M. Waterhouse, lieutenant and asst.-surgeon, U. S. A., from Fort Banks, Mass., to duty at Fort Meade, S. D.

Roy A. Wilson, acting asst.-surgeon, to Fort Slocum, N. Y., to accompany recruits to San Francisco, Cal., and return to his proper station, Fort Totten, N. Y.

Charles K. Winne, major and surgeon, U. S. A., member of a board to meet at Sheridan, Wyo., to examine into and report upon the most suitable site for a permanent military post on the military reservation near that place.

#### DEATH

General McArthur cabled from Manila, P. I., June 5, 1900, notice of the death of Lieut. Raphael A. Edmonston, asst.-surgeon, 34th Vol. Inf. of carbunculosis of face.

### NAVY CHANGES.

Changes in the medical corps of the U. S. Navy for the week ending June 9, 1900.

P. A. Surgeon A. M. D. McCormick, detached from the *Montgomery* and ordered to the *Chicago.*

Asst.-Surgeon J. H. Whiting, detached from the *Chicago* and ordered to the *Montgomery.*

P. A. Surgeon W. C. Braisted, ordered to the *Massachusetts* immediately.

P. A. Surgeon L. L. Von Wedekine, detached from the *Richmond* and ordered to the *Indiana* immediately.

Pharmacist S. W. Douglas ordered to additional duty on the *Massasoit.*

### MARINE-HOSPITAL CHANGES.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the seven days ending June 7, 1900.

Surgeon C. E. Banks, granted leave of absence for two months and 20 days from July 1, 1900.

Surgeon D. A. Carmichael, relieved from duty in the U. S. Consulate, and directed to assume command of the quarantine service at Honolulu, H. I., on June 14.

Asst.-Surgeon Taliaferro Clark, relieved from duty at the Tortugas quarantine station, and directed to proceed to Washington, D. C.

Asst.-Surgeon John McMullen, directed to assume command of the Tortugas quarantine station.

Asst.-Surgeon J. W. Amesse, directed to proceed to Honolulu, H. I., and report to Surgeon D. A. Carmichael for duty.

Acting Asst.-Surgeon L. C. Bean, granted leave of absence for 10 days from June 4.

Acting Asst.-Surgeon John E. Bready, granted leave of absence for 7 days from June 16.

Acting Asst.-Surgeon W. J. O'Reilly, granted leave of absence for 5 days from June 1.

Acting Asst.-Surgeon C. F. Ulrich, granted leave of absence for 29 days from June 1.

Hospital Steward and Chemist W. F. Macdowell, directed to report at the bureau for instructions preliminary to departure for Havana, Cuba.

Hospital Steward F. R. Hanrath, granted leave of absence for two months, on account of sickness, from date of being relieved from duty.

Hospital Steward S. W. Richardson, directed to rejoin station at St. Louis, Mo., and then to proceed to Savannah and Waycross, Ga., for special temporary duty.

Hospital Steward Myron R. Mason, relieved from duty at Portland, Me., and directed to proceed to Dutch Harbor, Alaska, and report to medical officer in command for duty and assignment to quarters.

Hospital Steward J. E. Beck, relieved from duty at San Francisco, Cal., and directed to proceed to proceed to Fort Stanton, N. M., and report to medical officer in command for duty and assignment to quarters.

### HEALTH REPORTS.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Marine-Hospital Service, during the week ended June 16, 1900.

#### SMALLPOX—UNITED STATES

California: Oakland, May 12 to June 2, 5 cases.

Colorado: Arapahoe Co., May 28 to June 4, 1 case; Archulita Co., May 28 to June 4, 1 case; El Paso Co., May 28 to June 4, 2 cases; Logan Co., May 28 to June 4, 1 case; Mesa Co., May 28 to June 4, 1 case.

Delaware: Wilmington, June 2-9, 1 case.

District of Columbia: Washington, June 2-9, 4 cases.

Illinois: Cairo, May 26 to June 2, 4 cases; Chicago, June 2-9, 4 cases.

Indiana: Evansville, June 2-9, 1 case.

Kansas: Wichita, June 2-9, 5 cases.

Kentucky: Covington, June 2-9, 28 cases.

Louisiana: New Orleans, June 2-9, 41 cases, 21 deaths.

Maine: Portland, June 2-9, 4 cases.

Massachusetts: Fall River, June 2-9, 9 cases; Lowell, June 2-9, 1 case.

Michigan: Grand Rapids, June 2-9, 1 case; Jackson, June 2-9, 1 case.

New Hampshire: Manchester, June 2-9, 2 cases.

New York: New York, June 2-9, 4 cases.

North Carolina: Newbern, June 6, Several cases.

Ohio: Cleveland, June 2-9. 22 cases.

Tennessee: Memphis, May 20 to June 2, 13 cases.

Utah: Salt Lake City, June 2-9, 2 cases.

### SMALLPOX—FOREIGN.

Austria: Prague, May 19-26, 5 cases.

Belgium: Ghent, May 19-26, 1 death.

Egypt: Cairo, May 12-20, 4 deaths.

England: Liverpool, May 19-26, 1 case, 2 deaths; London, May 19-26, 5 cases.

France: Paris, May 19-26, 1 death.

Mexico: Chihuahua, May 26 to June 2, 2 deaths.

Philippines: Manila, April 21-28, 3 cases, 7 deaths.

Russia: Moscow, May 12-19, 11 cases, 2 deaths; Odessa, May 19-26, 7 cases, 1 death; St. Petersburg, May 12-19, 33 cases, 10 deaths.

Straits Settlements: Singapore, April 21-28, 2 deaths.

### YELLOW FEVER.

Colombia: Panama, May 29 to June 5, 3 cases.

Cuba: Havana, May 26 to June 2, 3 cases.

Mexico: Vera Cruz, May 26 to June 2, 9 deaths.

### CHOLERA.

Siam: Bangkok, April 19, Epidemic.

### PLAGUE.

China: Hongkong, April 28 to May 5, 34 cases, 32 deaths.

Egypt: Alexandria, May 12-19, 3 cases, 1 death; Port Said, April 20 to May 28, 41 cases, 21 deaths.

Philippines: Malabon, April 20, 2 cases; Manila, April 7-28, 41 cases, 30 deaths; San Pedro Macote, April 20, Reported.

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## Current Medical Literature.

Titles not marked with an asterisk (*) are noted below.

### Medical Record (N. Y.), June 9.

1.—*Cholecystectomy for Gall-Stones. C. D. Gibson.
2.—*Acute Suppurative Folliculitis of the Scalp. Wm. S. Gottheil.
3.—*Effect of Summer Heat upon the Public Health. Henry D. Chapin.
4.—*Seasickness and What to do With It. Herman Bartsch.

### Philadelphia Medical Journal, June 9.

5.—*Endowment of Medical Colleges. W. W. Keen.
6.—*Conclusions Reached After Study of Typhoid Fever Among American Soldiers in 1898. Victor C. Vaughan.
7.—*Criticism in Medicine. George Dock.
8.—*Gastric Ulcer: Nonperforating-Hemorrhage. Wm. L. Rodman.

### New York Medical Journal, June 9.

9.— Clinical and Pathological Observations on Some Early Forms of Epithelioma of the Skin. J. A. Fordyce.
10.— Some New Traction Apparatus for Hip Disease, Pott's Disease, Etc. R. Tunstall Taylor.
11.—*"Estivo-Autumnal Fever" in New Orleans, Summer and Autumn, 1899 (concluded). H. A. Veazie.
12.—*Treatment of Opium Habit by Bromid Method. Archibald Church.
13.—*Collection, Preservation and Transportation of Clinical Material for Laboratory Examination. Stuart Hart.
14.—*Ethlyic Bromid as Anesthetic for Short Operations. Paul F. Sondern.

### Boston Medical and Surgical Journal, June 7.

15.—*Chairman's Address before the Section on Practice of Medicine. George Dock.
16.—*Clinical Report of Cases of Infection due to Bacillus Aerogenes Capsulatus of Welch. Paul Thorndike.
17.—*Report of Cases in which Bacillus Aerogenes Capsulatus was found. Joseph H. Pratt.
18.—*New Method of Intra-Abdominal Operation for Retroverted Uteri. George W. Kaan.
19.— New Nasal Scissors for Removal of Lower Turbinate. Carolus M. Cobb.

### Medical News (N. Y.), June 9.

20.—*President's Address before the AMERICAN MEDICAL ASSOCIATION. W. W. Keen.

### Cincinnati Lancet-Clinic, June 9.

21.—*Medical Treatment of Gall-Stones. Edward S. Stevens.
22.— Eye-Strain. Louis Stricker.
23.— Appendicitis: Its Etiology and Treatment. J. Ambrose Johnston.

### Medical Review (St. Louis, Mo.), June 2.

24.—*What not to do in Ear, Nose and Throat Work. M. A. Goldstein.
25.— Case of Multiple Malignant Lymphoma (or Hodgkin's Disease). J. W. Smith.

### American Practitioner and News (Louisville, Ky.), May 1.

26.— Some Sociologic Problems for the Medical Man. Ernest G. Mark.

### Railway Surgeon (Chicago), May 29.

27.—*Traumatic Lumbago. Howard J. Williams.
28.— Membranous Conjunctivitis. Thomas McDavitt.
29.— Alcohol as Neutralizer of Poisonous Effects of Carbolic Acid on Tissues. C. H. Richardson.

### Annals of Ophthalmology (St. Louis, Mo.), April.

30.—*Ocular Findings in Study of Twenty-three Cases of Epidemic Cerebro-Spinal Meningitis. Burton K. Chance.
31.— Hemianopsia, Half-Blindness. Its Forms, Anatomy, Etiology, Diagnosis, Prognosis and Therapy (continued). Hermann Schmidt-Rimpler.
32.—*Lesions of Frontal Sinus and Anterior Ethmoidal Cells and Their Surgical Management. Robert Sattler.
33.— Vesicular Keratitis Following Cataract Extraction. Report of Case. Edgar S. Thomson.
34.—*Case of Reflex Amaurosis. H. C. Sloggett.
35.— Anisometropia and Normal Refraction. Carl Schulin.

### Therapeutic Gazette (Detroit, Mich.), May 15.

36.— Treatment of Simple Fracture of Femur; with Especial Reference to Methods in Use at the Pennsylvania Hospital and Remarks upon Asymmetry in Relation to Shortening After Fracture. Thomas G. Morton.
37.— Frequent and Unavoidable Deformity from Fracture in Upper Third of Shaft of Femur. Oscar H. Allis.
38.— Treatment of Fractures of Femur in Children. Henry R. Wharton.
39.— Operative Treatment of Fractures of Femur. Gwilym G. Davis.
40.— Ultimate Results of Fracture of Femur. Edward Martin.

### American Journal of Medical Sciences (Philadelphia), June.

41.—*Surgical Anatomy of Congenital Dislocation of Hip-Joint. Edward H. Nichols and Edward H. Bradford.
42.—*Fifth Case of Family Periodic Paralysis. Leo M. Crafts.
43.—*Permanent Non-Progressive Ataxia, with Clinical Report of Three Cases. Sanger Brown.
44.—*Spinal Cord Changes in Paralysis Agitans. Max. Nonne.
45.—*Pathologic Anatomy of Cord in Paralysis Agitans and Senility. Charles L. Dana.
46.—*Contribution of Pathology in Chronic Hyperplastic Tuberculosis of Cecum, Based upon Study of Two Cases, in One of which Carcinoma of Cecum Coexisted. T. R. Crowder.
47.— Embryonal Renal Adenosarcoma. Maxmilian Herzog and Denslow Lewis.

### Clinical Review (Chicago), June.

48.— Preparation for Obstetrical Operations. C. S. Bacon.
49.— Laryngectomy for Carcinoma: Recurrent Carcinoma: Fibroma: Fracture of Internal Condyle: Perineorrhaphy. Jacob Frank.
50.— Epilepsy with Pronounced Stigmata of Degeneracy: Cerebral Paralysis with Marked Aphasia: Partial Paralysis: Syringomyelia: Acute Mania following Trauma: Case of Spinal Concussion: Traumatic Epilepsy: Two Cases of Facial Paralysis. Daniel R. Brower.
51.— Exophthalmic Goiter: Mitral Stenosis: Empyema: Croupous Pneumonia. J. M. Patton.
52.— Surgical Clinic. Franklin H. Martin.
53.— Clinical Lectures upon Etiology, Pathology, Diagnosis and Treatment of Tumors. A. H. Levings.

### International Journal of Surgery (N. Y.), June.

54.—*When to Operate in Appendicitis, and Why. John B. Murphy.
55.— Surgical Treatment of Chronic Empyema. Francis Reder.
56.— Regional Minor Surgery (continued). George G. Van Schaick.
57.—*Total Resection of Spermatic Cords vs. Castration and Vasectomy in Treatment of Prostatic Hypertrophy. G. Frank Lydston.
58.— Technique of Surgical Gynecology (continued). Augustin H. Goelet.
59.—Treatment of Fractures (continued). W. L. Estes.
60.— Aspects of Electric Treatment in Medicine and Surgery. J. McF. Gaston.
61.— Introductory to Mechanical Diagnosis and Treatment of Urethral Diseases (continued). Ferd. C. Valentine.
62.— Simultaneous Fracture of Vault and Base of Skull. Operation; Recovery. Howard Lilienthal.
63.— Contrast Between Shock and Feigned Injuries. C. A. Teague.
64.— Conservatism in Management of Contused and Lacerated Wounds of Extremities. R. S. Toombs.

### Kansas City Medical Index-Lancet, June.

65.— Constipation. S. C. James.
66.— Chemical Analysis of Urine. E. G. Davis.
67.— Inversion of Uterus. A. H. Cordier.
68.— Gastro-Intestinal Disease (to be continued). C. W. Dulin.
69.— Evacuation of Uterus with St. Cyr Curette. D. W. Basham.
70.— Hysteria; Its Protean Manifestations and Treatment. John Punton.

### St. Louis Courier of Medicine, May.

71.—*Mechanical and Surgical Problems in Paralyses in Children. Virgil P. Gibney.
72.— Leprosy: A Clinical Lecture. Isadore Dyer.
73.— Peroneal Muscular Atrophy. Given Campbell.
74.— Abortion; or, Expulsion of Unviable Fetus. Chas. O. Molz.
75.— True Interpretation of Certain Sounds in Physical Diagnosis. Warren B. Outten.

**Toledo Medical and Surgical Reporter, June.**

76.— Treatment of Typhoid Fever. Anna G. Smith.
77.— Feeding of Infants. J. D. Ely.

**Brooklyn Medical Journal, June.**

78.—*Varieties of Rheumatism and Their Differential Diagnosis from Rheumatoid Affections. Glentworth R. Butler.
79.— Bacteriology of Acute Rheumatism. Ezra H. Wilson.
80.—*Etiologic Factors in Rheumatism. W. N. Belchar.
81.—*Is There a Surgical Side to Acute Rheumatism? A. T. Bristow.
82.—*Thermaerotherapy in Rheumatic Affections. G. L. Kessler.

**Woman's Medical Journal (Toledo, Ohio), May.**

83.— Placenta Previa. Jane R. Keefer.
84.— Exophthalmic Goiter. Cora A. Moon.

**Merck's Archives (N. Y.), May.**

85.—*Adonidin: Physiologic and Medicinal Properties. Heinrich Stern.
86.—*Urea and Uremia. H. P. Colie.
87.—*Influence of Ichthalbin on Metabolism and Intestinal Activity. Drs. Rolly and Saam.

**St. Louis Clinique, June.**

88.— Relation of Chemistry to Practice of Medicine. C. W. Lillie.

**Yale Medical Journal (New Haven, Conn.), June.**

89.— Parasitic Eczemas. Chas. A. Kinch.
90.— Pott's Disease. Dudley Carleton.
91.—*Some Notes on Use of Hyoscin. Henry S. Noble.

**The Medical Dial (Minneapolis, Minn.), June.**

92.— Notes from a Lecture on Paresis Before the Senior Medical Class of Hamline University. C. K. Bartlett.

**The Post-Graduate (N. Y.), May.**

93.— Memorial Papers on Dr. William A. Hammond. By A. E. Lancaster, D. B. St. John Roosa, Joseph Collins, Chas. L. Dana Joseph R. Smith and Andrew H. Smith.
94.— Some Neurologic Notes. Philip Meirowitz.
95.— Concerning Amblyopia and Squint. Francis Valk.
96.— Reply to Prof. Valk's Paper "Concerning Amblyopia and Squint." A. E. Davis.
97.—*Physics of Steam Sterilization. Theodore Dunham.
98.— Physiologic and Artificial Sleep, with Remarks upon New Hypnotic: Chloretone. Wm. Henry Porter.
99.— Notes from Clinics. Dr. Caillé.

**Medical Standard (Chicago), June.**

100.— Illinois State Medical Society Organization. William O. Ensign.
101.— Syphilis: Phenomena and Management. Wm. S. Gottheil.
102.— Some Considerations in Diagnosis and Treatment of Diseases of Stomach. A. A. Kerr.
103.— Peritonitis Epidemica. Marcus P. Hatfield.
104.— Treatment of Hemiplegia, Enlarged Prostate, etc., by Electro-Therapeutics. C. S. Neiswanger.
105.— Treatment of Diseases of the Heart. Albert Abrams.

**Pennsylvania Medical Journal, May.**

106.— Address before Butler County Medical Society: How to Maintain a Professional Existence. H. D. Hockenberry.
107.— Grave Diseases in Young Children often Due to Latent and Unsuspected Inflammation of Middle Ear. Charles H. Burnett.
108.— Seventy-five Cases of Abdominal Surgery. W. D. Hamaker.
109.—*Treatment of Typhoid Fever. T. Q. Garvey.
110.— Progress of Laryngology. Lewis S. Somers.

**Southern Practitioner (Nashville, Tenn.), June.**

111.—Intestinal Obstruction (continued). Richard Douglas.
112.—Alcohol as an Anesthetic. Deering J. Roberts.

**Canadian Journal of Medicine and Surgery (Toronto), June.**

113.—*Relation of Deformity of Pelvis to Lateral Curvature of the Spine. H. P. H. Galloway.
114.— Clinical Notes on the Use of Eudoxin in Typhoid Fever. A. J. Harrington.
115.— Broad Ligament Cyst. Chas. M. Smith.

**Georgia Journal of Medicine and Surgery, June.**

116.— Human Tuberculosis with Especial Reference to Pulmonary Consumption, "The Great White Plague." W. L. Hughlett.
117.— The Physician the Nation's Guardian. J. Cheston King.
118.— Diseases of Stomach. Edgar J. Spratling.
119.—*Report of Unique Case of Appendicitis, with Some Thoughts on Treatment. James T. Jelks.

**Texas Medical Journal (Austin), May.**

120.— Maladministration of Public Medical Affairs in State of Texas. H. A. West.
121.— Three Cases of Closure of Jaws, Produced by Mercurial Stomatitis. J. E. Thompson.

**Medical Council (Philadelphia), June.**

122.— The Eye: How It Sees; Its Defects; and Their Cure with Glasses (continued). A. H. P. Leuf.
123.— Fibro-Myoma of Vulva. A. Morgan Cartledge.
124.— Gastritis: Its Pathology and Treatment. G. M. Randall.
125.—*Treatment of Appendicitis, with Report of Eight Cases. Oscar S. Brown.
126.— Treatment of Diseases of Nose, Throat and Ear by Family Physician. E. B. Gleason.
127.— Points in Surgery. Wm. V. Morgan.

**Charlotte Medical Journal, May.**

128.— Bacterial Diseases in General. Geo. W. Pressly.
129.— Hypertrophy of Pharyngeal Tonsil. Walter W. Duson.
130.— Sanitary Supervision of Schools. R. Percy Smith.
131.— Mitosis, or Regeneration of Endometrium. Byron Robinson.
132.— Laryngeal Diphtheria. Eugene B. Glenn.

**Journal of Comparative Neurology (Granville, Ohio), May.**

133.— Observations on Sensory Nerve-Fibers in Visceral Nerves, and on their Modes of Terminating. G. Carl Huber.
134.— Sensory Nerve Terminations in Tendons of Extrinsic Eye-Muscles of the Cat. G. Carl Huber.
135.— Contribution on Nerve Terminations in Neuro-Tendinous End-Organs. G. Carl Huber and Lydia M. De Witt.
136.— New Brain Microtome. Henry H. Goddard.
137.— Proposed Neurologic Bibliography of Ichthyopsida. F. J. Cole.
138.— Number and Size of Nerve Fibers Innervating Skin and Muscles of Thigh in Frog (Rana Virescens Brachycephala, Cope). Elizabeth H. Dunn.
139.— Digest and Criticism of Data upon which is Based the Theory of Ameboid Movements of Neurone. H. Heath Bawden.

**Memphis Medical Monthly, June.**

140.— Aseptic Management of Normal Labor. S. S. Crockett.
141.—*Notes on Some Points in Obstetric Practice. Gustav Kolischer.
142.— Treatment of Urethral Stricture. W. Frank Glenn.
143.—*Warning in Regard to Vaccination. Some Comparisons. F. J. Runyon.
144.— Modern Smallpox, with Report of Cases. F. S. McRady.

**New Orleans Medical Journal, June.**

145.— Some Recent History of Smallpox in New Orleans. Quitman Kohnke.
146.— Vivisection is a Necessity for Medical Progress. S. P. Delaup.
147.— Annual Report of 1900 to President of Tulane University of Louisiana, at Annual Commencement of Medical Department, May 2, 1900. Stanford E. Chaillé.
148.— Medical Journalism. Chas. Chassaignac.
149.— Report of Case of Gunshot Wound of Left Lumbar Region, Penetrating Abdomen: Three Wounds of Colon and One of Stomach. Celiotomy. Enterorrhaphy. Recovery. E. D. Fenner.
150.— Case of Dermatitis Herpetiformis in Child Three Years of Age Cured by Circumcision. J. N. Roussel.

## AMERICAN.

1. **Cholecystectomy for Gall-Stones.**—The removal of the gall-bladder has not been a popular operation, especially in English-speaking countries, but Gibson believes that it has a far wider field of usefulness than its history would indicate. He reports two cases in which this operation was performed to advantage. One was that of a young person, with chronic cholecystitis and numerous stones in the gall-bladder, who came under observation during an acute exacerbation. The bladder was dissected out whole, and uneventful convalescence followed. In the second case, there was a small atrophic gall-bladder with stones and impacted calculi in the cystic and common ducts. This case occurred in an elderly woman. Choledochotomy was performed and cholecystectomy was the supplementary operation. There was a temporary benefit, but the patient died from exhaustion, due chiefly to capillary hemorrhage from jaundice. The cholecystectomy was not an essential feature in the fatal result, and Gibson says that this was the only possible method of dealing with the gall-bladder. He believes that this method is a physiologic operation, and that, while it is more dangerous in itself than cholecystotomy, it will not be in properly selected cases. The objection that it deprives the body of an organ of more or less physiologic importance, he answers by questioning the real necessity of a gall-bladder. In conclusion, he sums up the conditions calling for this operation as follows: "In all cases of cholecystitis with or without stones, acute or chronic, provided that the gall-bladder and gall-ducts can be properly explored, and that the conditions promise an easy removal of the gall-bladder, it is to be borne in mind that the more distended the gall-bladder, the more likely is its separation from the liver to be easy, and provided that the common and cystic ducts—sometimes also the hepatic—are demonstrated to be free from stone, and that in addition to stone there is no other obstruction of the lumen of the common duct such as a tumor, benign or malignant, of the pancreas. The operation is also recommended even when its performance is difficult or possibly entails a slightly greater risk in a limited class of cases—that is, when it is the only satisfactory way to deal with the gall-bladder as a prophylactic measure against malignant disease in the presence of long-standing irritation. If these various limitations receive a strict interpretation, the number of cholecystectomies that are justified by the above indications will be comparatively restricted, and the operation will be done only under circumstances that permit of its greatest usefulness with a minimum of risk."

2. **Acute Suppurative Folliculitis of the Scalp.**—Gottheil discusses two cases of disease that, he thinks, differ from the

types described by French and other authorities, in that at least one of these recovered. Washing with disinfectants, like salicylic acid oil, warm water and tar soap, and later xeroform and olive-oil finally produced a cure in about three months after beginning the treatment. All the hair follicles were involved and every hair shaft was detached, but the papillæ were not destroyed and the hair reappeared as abundantly as before though somewhat more inclined to be curly. This seems to form a picture that differs essentially from the folliculitides described by Quinquaud, Crocq, Besnier, and others.

3. **Effect of Summer Heat on Public Health.**—Chapin gives tables of the comparative mortality of the different months in the different years, showing the cases of gastro-intestinal diseases during the summer months in the city of New York. They show, however, a diminution of the death-rate from these troubles in the last few years, which is encouraging. Aside from gastro-intestinal disease, one of the greatest dangers in the summer months is from sunstroke. The general depression, due to great heat and humidity, is also noticed. In two nervous diseases, meningitis and convulsions, the summer death-rate is higher than the winter, though it is possible that some of the cases of meningitis are incorrectly diagnosed. Everything that can be done by the municipality to prevent the results of this unfavorable condition should receive attention, as the removal of decaying matter, the planting of small parks to give the cooling and purifying effect of vegetation, and especially cleanliness and care in the home life of the citizens. The use of alcoholics should be protested against and also the excessive use of nitrogenous foods.

4. **Seasickness.**—The instructions offered by Partsch for those liable to incur seasickness are to take no special precautions beforehand, to arrange to have nothing on the mind as regards conveyance, clothing, etc. Good ventilation should be looked for, hence, rooms amidship are preferable. The air inside should be as good as that outside if possible, as second-hand air is a factor in the causation of seasickness. He suggests staying on deck as much as possible, with the eyes closed most of the time, especially during the day, until immunity from optical vertigo is acquired. By this is meant the dizziness and nausea which often follows continued observation of unusual conditions in the environment. When the slightest sensation of illness is felt, one should lie down at once and close the eyes, using only one pillow, or none at all if very sick, as a pillow often makes the difference between almost absolute ease and great misery. Steamship motion can be analyzed into twenty-six different factors, and is, therefore, very complicated and almost incomprehensible. The person not being adjusted to the variations, the case becomes much like that produced by going up and down uneven stairs in the dark. The shock or disturbances occur in a continued series, each varying slightly and result in an accumulation of violence that we call seasickness. What is first disturbed in the mechanism is the vaso-nervous system; the blood-vessels in the abdominal cavity are relaxed, thus permitting the occurrence of a deficiency in the brain which is subjectively interpreted as nausea. Retching is Nature's remedy for this condition; the regurgitation of food from the stomach being merely an incident. After two or three days' seasickness and abstinence from food the patient's blood becomes impoverished, and this must be remedied by eating; if enough can not be taken at one time, frequent eating is recommended, seven times a day being about right. One should eat about fifteen minutes before rising, the three regular meals, half-way between meals, and at bedtime. He thinks that it matters very little what is eaten provided it is what is craved. Porter and stout are good, and so are hard, sour apples. When one is already seasick, liquid foods that require the least in digestion are best; when able to be up and about the meals should be eaten regularly, and followed by recumbency for at least fifteen minutes. At the table it is best to commence eating as soon as seated; if necessary in order to do so go to the table late and if possible stipulate with the steward for immediate attention. He prescribes malt beverages and alcoholics quite freely, and advises the patient to have a supply of eatables in the stateroom, making due allowance, of course, for the rats. All mental and muscular exercise should be avoided. When eating little, constipation is natural, but if it continues in convalescence, an enema of 20 drops of glycerin is the best relief. If the seasickness is accompanied with serious headache or mental uneasiness bromid is useful.

5.—See The Journal of June 9, p. 1445.

6.—Ibid., p. 1451.

7.—Ibid., p. 1459.

8.—See abstract in The Journal of May 19, p. 1259.

11. **"Estivo-Autumnal Fever."**—Veazie concludes his discussion of the diagnosis of yellow and malarial fever and their combination. His article is written simply to emphasize the fact that by clinical evidence alone we can not, in many cases, distinguish malarial and other pathologic conditions from yellow fever without the aid of the most searching microscopic and bacteriologic research. He agrees in this with the report of the Marine-Hospital Yellow Fever Commission. See also abstract in The Journal of June 16, ¶ 2, p. 1579.

12.—See abstract in The Journal of May 26, p. 1335.

13. **Collection of Clinical Material for Examination.**—Hart gives directions for collecting blood, serum and other materials for laboratory examination. The blood is best obtained from the tip of the finger or the lobe of the ear, the part having been carefully cleansed. A quick stab with an ordinary surgical needle will afford a free flow, which should be obtained without pressure. The first drop should be washed away and the blood then collected on glass microscopic slides. Blood serum can be obtained by raising a small blister, and collecting on a slide. Gastric contents should be collected in a wide-necked bottle that has been carefully washed. He figures a special form of sputum box, that will also do for the preservation of feces. For urine examinations at least three specimens should be obtained in the twenty-four hours, one on rising, the second at midday, and the third at bedtime. By adding some substance of bactericidal properties, the sediment and urea content may be preserved unchanged. For this, he suggests the use of urotropin, 1 gram to each 100 c.c. collected.

14. **Ethylic Bromid.**—Sondern recommends this agent as one of the safest and best for short operations. It must be very volatile, when poured on the hand must evaporate rapidly, must be entirely colorless and have a sweet odor. The entire quantity for a child is 5 to 10, and for an adult 10 to 20 grams. This is poured on an anesthesia mask, allowing only a small quantity of air. Anesthesia is obtained in from twenty to forty seconds, when the mask is removed and not reapplied. The administration must be arrested at the proper time, which is shown by the relaxation of the muscles of the neck and arms. If this is unobserved and the anesthesia is continued the muscles contract and there is danger of asphyxia, especially when operating on the larynx. If this moment has been allowed to pass, it is better to let the patient come out, and reanesthetize, preferably at another time. The anesthesia lasts about two minutes. For a person from 3 to 16 years of age, ethylic bromid has no equal, as the patient, though not completely unconscious, feels no pain. The fatal cases recorded may be attributed to either the use of ethylene instead of ethylic bromid, the use of an old solution, the use of the drug in repeated small quantities, the continuance of administration for longer than one minute, or repeated administration. The mask should never be applied more than twice at one sitting, as a case has been recorded where death occurred at the third application.

15.—See The Journal of June 9, p. 1445.

16 and 17. **Bacillus Aerogenes Capsulatus.**—Thorndike reports four cases of chronic malignant edema, in which the special bacillus of the disease was not found. Three of these cases occurred in the practice of Dr. Post, and one was of his own observation. He suggests that they are due to the bacillus aerogenes capsulatus of Welch. The lesson to be learned from these cases is to operate as soon as possible and after the time when the whole of the diseased tissue can be removed, if earlier operation is impossible. Pratt reports on the same sub-

ject five cases, including Thorndike's, with bacteriologic examinations. Of these only one was a case of pure infection with the gas bacillus, and it shows the marked progressive properties it may possess. In three cases, the organism appeared to gain entrance into the system from the gastro-intestinal tract, and in two, it was probably introduced by dirt through the wounds of the skin. The first case shows how rapidly the germs can be destroyed by cold. Immediately after death the body was placed in a cold-storage room where the temperature fell at night to 26 F., and it remained there sixteen hours. The bacilli found were in a condition impossible to cultivate. This Pratt attributes to the action of cold; a peculiarity that has been already noticed by Blumer, Welch and Flexner. The lesions produced by the gas bacillus on muscle tissue are remarkable; In some places the fibers were broken into small pieces and the fragments separated one from another and laid in different planes. Their torn edges were distinct, and their striæ well preserved, giving an appearance of debris, thrown about by an explosion. In other places, degeneration and digestion of muscle fibers appeared to have taken place.

18. **Uterine Retroversion.**—Kaan reports an operation that has some advantages in cases of retroversion. This method consists in picking up the round ligaments on a gathering-string and so shortening them that the uterus is placed in the normal position. He picks up the round ligament and peritoneum together with a double hook, about midway between the cornu of the uterus and the internal abdominal ring, then passes a suture of silk subperitoneally from the uterus as far outward along the round ligament as seems necessary. The tissue is puckered along this suture, the two ends of which are then tied together with moderate traction. To avoid cutting through, the silk used is of medium size and is passed into the tissue of the fundus at its point of entrance and through the ligamentous tissue at its exit. The strain on this stitch, however, is not nearly so great as on those of ventral suspension, which drags the uterus out of position.

20.—See The Journal of June 9, p. 1445.

21. **The Medical Treatment of Gall-Stones.**—Stevens holds that it is frequently difficult and often impossible to make a positive diagnosis of gall-stones, and that there is no known medicine by which their solution can be effected. Introducing a canula into the gall-bladder for the purpose of sounding for stones, introducing solvent remedies, or withdrawing fluids is dangerous as compared with the amount of good likely to be obtained, and should not be practiced. The same is true of massage in emptying the gall-bladder; and he says that there is only one safe and radical cure, that is, surgical operation. There is, nevertheless, what may be called a medical treatment of gall-stones that is often efficient in the relief of pain and other symptoms, and satisfies the patient that something is being done. Hot water applications may do some good but the use of opiates at the beginning of the attack is to be avoided. Constipation and intestinal sepsis should be treated. The administration of laxative medicines is often followed by so remarkably favorable results that the patients sometimes believe they have been cured, and the physician is also deceived. Salines and oils tend to lessen the congestion and cause an expulsion of septic products, and their use is, therefore, legitimate.

24. **What Not to Do in Ear, Nose and Throat Work.**—The things to be avoided that are mentioned by Goldstein are the use of water in syringing and attempting to get foreign substances, especially articles that swell, out of the ear; and the use of heavy, sticky oils with anodynes for the relief of pain. There is only one condition suitable for syringing, namely, the removal of impacted cerumen. He alludes to the abuses of the air-douche, and warns against its use in otitis media or acute coryza. The nasal douche also comes under his condemnation, and he thinks it will become obsolete. The spray requires too much air-pressure for its manipulation, thus causing much irritation and sometimes damage instead of benefit. The use of concentrated and irritating medicines in the nasal passages is also condemned. The use of cocain to make the patient feel relieved without permanent benefit should come under the head of malpractice.

27. **Traumatic Lumbago.**—By traumatic lumbago, Williams understands a sprain or contusion of the lumbar and ligamentous attachments of the vertebræ, which is one of the most common predecessors of spinal traumatic neurosis or neurasthenia. It is characterized by pain and difficulty in moving and, in some cases, interference with bladder and rectum, due to the pain. There is no paralysis, though at times there may be incontinence or retention. The duration of the condition is variable, the symptoms usually passing off in a month or less, but the back is often left sensitive for months or years. He does not believe that the cord is injured in these cases, and thinks that the hysterical disturbances and neurasthenia that follow are largely, if not totally, due to suggestion.

30. **Ocular Findings in Cerebrospinal Meningitis.**—The details of the ocular findings in 23 cases are given by Chance. Most of these were studied during the second or third week of the disorder and under considerable difficulty as regards ophthalmoscopic examination. Slight conjunctival discharges were observed in 7 cases. Motor disturbances were: internal squint of both eyes in 2 cases, complete ptosis of the left side in 1, complete mydriasis in 1, with slight contraction during convergence. Irregular degrees of dilatation of both eyes were observed in 6, and pin-point contraction in 3 cases. In no case was there cloudiness or other disturbance of the media, nor any disease of the iris, choroid or retina. In all the cases examined, there was congestion of the optic disc with some congestion of the choroid and retina. The optic nerve-heads were edematous and their surfaces and border lines blurred, usually unequally in two eyes. One case presented a height of three diopters in the right disc while the left side was measured by five. No hemorrhages nor embolic infarctions were observed in any of the cases, but in numerous instances, lymph-sheaths of even the smallest vessels were distended. In two or three, a certain circumpapillary region was free, while the swellings were noted in the periphery some distance off.

32. **Lesions of the Frontal Sinus, Etc.**—After describing the anatomy and development of the frontal sinus, Sattler gives the treatment of inflammation of these parts and the outcome. The successful treatment is almost exclusively surgical; and the author condemns an attempt to establish drainage through the closed and occluded fronto-nasal canal. The only method to be recommended is opening from without, the technique of which he describes.

34. **Reflex Amaurosis.**—The condition reported by Sloggett, which is unique in his experience and which he finds mentioned only by Swanzy, and by him discredited, is one of amaurosis due to reflex from the teeth. His patient had had no toothache or pain in the teeth themselves during the manifestation of eye symptoms which were completely relieved by the extraction of the decayed roots. The ophthalmoscopic examination throughout had been negative as regards any pathologic conditions, while the light perception was entirely lost during the attack.

41. **Congenital Dislocation of the Hip-Joint.**—Bradford discusses the anatomical causes of relapses after forcible reduction of congenital dislocation of the hip-joint. His observations are based entirely on the examination of five specimens. He finds that the principal anatomical peculiarities, which vary considerably in the individual cases, are dislocation of the head of the femur outward and slightly forward on the surface of the ilium, with a narrow triangular acetabulum facing more or less directly outward. The head of the femur is diminished in size and the angle of the neck to the shaft is reduced to nearly a right angle, while there is an increase in the angle of femoral torsion. The capsular ligament may be in the form of an hour-glass or simple sac, adherent to the surface of the ilium above, sometimes about the acetabulum below, and contracted at the neck of the femur. The obstacles to reduction are the peculiar attachment of this ligament, causing shortening of the ligamentous bands at various points, chiefly laterally and below; its constriction, sometimes in the middle, making it impossible to draw the head of the bone through; thickening of the capsule just above the apex of the acetabulum; adhesions between capsule and head of the

femur; contraction of the acetabulum; increase of femoral torsion so that when the head of the femur is placed in the normal acetabulum the knee looks inward. The obstacles to retention of the head after complete reduction are: flattened, or insufficient and too oblique acetabulum; insufficient head; short neck of the femur, and obliteration of the cavity of the acetabulum by a mass of dense fibrous tissue. The development of successful treatment of congenital dislocation of the hip will depend on the accumulation of experience and thorough pathologic knowledge. The skiagraph is of great value, and if it is perfected to an extent that will enable one to see more perfectly the condition before, during, and after treatment, still greater results may be expected.

42. **Periodic Family Paralysis.**—Crafts reports a case of this condition which he considers due to a toxin acting periodically, though it is possible that this or a similar toxic agent is causative also in myotonia and myopathies.

43. **Permanent Non-Progressive Ataxia.**—Three cases of permanent ataxia of rather dubious pathologic nature are reported by Brown, but he does not give any original hypothetic explanation. Two of them seem to be associated in their origin with pregnancy and its accidents. The other is that of a man, who was first troubled with blindness and severe headaches.

44 and 45. **Paralysis Agitans.**—Nonne's communication was called forth by a paper of Dana's, who, he thinks, differs from him in claiming positive lesions for paralysis agitans. He replies that the changes, which he found by the aid of the Nissl method, are the same as those discovered by Dana, and that there is no difference in the changes found in the senile cord and those discovered in paralysis agitans. The changes are not pathognomonic either in his opinion or those of German authorities. Dana follows this paper with a note claiming that the differences between them are not great, as he has held that paralysis agitans is a distinct clinical entity and not premature senility, and that we should some time find its anatomical basis. In his experience, he does not find the pathologic picture of the two conditions identical. He says that he never claimed any pathognomonic changes in the anterior horn cells, and that he found that there is an unusual degree of degeneration, vascular and sclerotic change in the anterior horn in this disorder, and more there than in any other part of the nervous system. His view is that in this disease the interruption in the flow of nerve impulses from the corticospinal dendrites to the anterior horn cells is only a working hypothesis, but that it is in harmony with pathologic findings, as Nonne admits.

46. **Tuberculosis of the Cecum.**—Crowder describes two cases of tuberculosis of the cecum and discusses the pathology, anatomy, etiology, pathogenesis and course. He finds that it occurs about equally in the two sexes and that it seems probable that the acute infectious or inflammatory conditions play a part in the etiology, and that the specific tubercular infection may reach the cecum through food. The cecum is in the primary localization in a great majority of cases of tuberculosis of the intestinal tract, as shown by Fenwick and Dodwell. The nature of the process is essentially a slow, chronic inflammation of slight intensity and, if it is limited to the cecum and not associated with active pulmonary involvement, the progress is slow, and sooner or later produces a tumor which may pass on to necrosis and abscess, terminating in localized suppurative peritonitis, or may break through the abdominal wall. The extension of the disease may be by the peritoneum itself, causing tuberculous peritonitis, which is comparatively rare, or it may be downward through the colon. It is generally by way of the mesenteric lymphatics. The relation of tuberculosis to carcinoma is discussed in conclusion. In the second of his cases, the patient died of malignant disorder in this region, which seems to have taken its origin from old tuberculous ulcers. In the other, the disorder was localized and recovery was apparently complete after resection.

54. **When to Operate in Appendicitis.**—Murphy thinks that the number of deaths is much smaller than it was ten or twenty years ago, when it was called ‘inflammation of the bowels:” and that this is due to better surgical treatment. Speaking of the subject from a mortality standpoint, he excludes three classes of cases: appendicular colic, a condition which he thinks exists and can be diagnosed; catarrhal appendicitis as it is generally understood, since it does not materially, if ever, jeopardize life; partially recurrent appendicitis, a mild type which may be either the first or second of the above mentioned forms. The only one to be considered in relation to mortality is the acute infective appendicitis. He describes the conditions of this type as they occur, and discusses the symptoms. He believes that there is no need of asking "what will be the outcome" in any case where operation can be performed not over twenty-four or forty-eight hours after the beginning of the symptoms. If the diagnosis can be made in twenty-four hours and the operation performed immediately, there is a mortality of about 2 per cent., but after that the ratio greatly increases. If it is to be done, it should generally be inside of the first forty-eight hours. If the disease has advanced to the third or fourth day and there is circumscribed abscess with low temperature, it may perhaps be safe to wait, but even then the risk is possibly greater than that of operation. His general conclusion is that it is not justifiable to hold a single case of appendicitis beyond twenty-four hours after the diagnosis is made, without operating.

57. **Total Resection of Spermatic Cord.**—Lydston prefers total resection of the cord to either castration or vasectomy, as it is more rational and effective than the latter and superior to the former, for the following reasons: 1. It produces less traumatism, a very important item in old men. 2. It causes less danger to the kidney, because of minimized shock. 3. It causes none of the psychic disturbance incident to a consciousness of the loss of the testes. 4. It permits the use of cocain with more safety. 5. It makes subsequent shrinking of the testes so gradual that little complaint is made. Apropos of the danger of renal disturbance following castration, he says: I am satisfied that quite a proportion of the "peculiar" cases of mental aberration and delirium following the operation are uremic. The operation can be performed under cocain, .5 to 1 per cent. in 1 per cent. carbolic, with 10 per cent. antipyrin. One cord being resected at a time, it is easy to postpone the second operation in case the symptoms of cocain poisoning develop, which is very unlikely. The weakness of the patient may also be a cause for the second operation. He is in the habit of exposing the cord by an inch or inch and one-half incision over the inguinal ring. He divides the cord and ligates it in sections, taking out an inch or more of the structure. The vas deferens is excised separately, the stumps of the cord are sutured and tied together, and the tunica vaginalis is sutured carefully with catgut before closing the external wound.

71. **Paralyses of Children.**—The paralyses of children are: cerebral, spinal, and peripheral. The first of these may be considered as permanent for all practical purposes, the second often permanent, but the extent and duration depends on the cause, and the third is usually self-limited and complete recovery may occur. One of the first problems is in regard to what should be done with the muscles, i. e., whether we should advise exercise or rest. Gibney finds that in these patients it is best to advise absolute rest in the beginning, and to protect the joint from strain during the first year. He speaks highly of the practice of division of the tendons of contracted muscles, as putting them in better position and relieving the strain; and he has also grafted the tendons in certain cases. In conclusion, he says there is much to be learned in the treatment of paralysis, and many mechanical and surgical problems are yet to be solved. The early recognition of the lesions producing paralysis, the management of the early stages, the conservation of power, the protection of the fibrous structures about the joints, the prevention of deformity, when it does occur, the vicarious functions of muscles, the ablation of joints in "dangle legs," are points to which he calls attention.

78. **Varieties of Rheumatism.**—Rheumatism is here put under three heads: Rheumatic fever—acute or subacute, chronic articular, and muscular rheumatism. The first of these is an infectious disorder, the second not so clearly such, and the third has more evidence in favor of its neurotic origin

*than of its infectious character or close relation to the acute* form. The rheumatoid affections include gout and arthritis deformans; other types mentioned are acute arthritis of infants, joint symptoms in hemophilia and some affections of the nervous system, also rheumatic and tuberculous changes in the bones. The differential diagnosis is discussed, showing that while articular rheumatism is generally easily diagnosed, there are some conditions, especially in children, that may give a little trouble. Secondary arthritides of the acute septic forms are as a rule easily separated. Acute gout may be mistaken for rheumatism, but it occurs later in life, and is associated with local symptoms that are out of proportion to the constitutional disturbance. The acute forms of arthritis deformans may also give some trouble, but the greater elevation of temperature, more marked redness and pain and the presence of serous membrane inflammations will rule out arthritis deformans. There should be rarely any trouble in making the diagnosis in chronic rheumatism. Arthritis deformans is especially difficult to distinguish from rheumatic troubles in its early stages, but when the articular deformations occur there is not much doubt. Muscular rheumatism, as a rule, gives very little trouble in its diagnosis.

80. **Etiology of Rheumatism.**—Belcher notices the theories and the bacteriologic researches that have been published in regard to the cause of rheumatism, and concludes that acute rheumatism may be regarded as an infectious disease presumably induced by micro-organisms.

81. **Surgery of Rheumatism.**—Bristow's article is largely given to a discussion of O'Conor's method of treatment, which he thinks is more rational than might at first be supposed. He would not open the joints as soon as the nature of the disease is evident, but when there is danger of cardiac complication, or when the case has defied medical treatment. He thinks that this new departure is worthy of consideration and that we should follow it, avoiding rashness and holding fast to all that is good in it.

82. **Thermaerotherapy in Rheumatism.**—Kessler discusses the use of the hot-air treatment and notices a very large number of conditions in which it was of value, including acute articular, chronic muscular, and specific rheumatism, rheumatic pleurisy, rheumatic gout and arthritis deformans. He mentions the case of a patient who had been helpless for years but was completely relieved in thirty treatments.

85.—See abstract in our Therapeutics Department, this week.

86. **Urea and Uremia.**—From a consideration of the subject Coile concludes: 1. That acute uremia occasionally occurs without suppression of urine or obstruction to its flow, and in the absence of structural change of the kidney. 2. That acute uremia may occur while the amount of urea excreted is far above the normal. 3. That in such cases the increased amount of urea in the blood is from rapid tissue disintegration, until the blood is badly poisoned, and then is probably increased by nitrogenous food eaten, which can not be assimilated, and which disintegrates in the blood. 4. That in the treatment of acute uremia active diaphoresis is of little value, as so small an amount of urea is obtained that it is practically unappreciable, and the blood is thus deprived of its water and salt, which is not only unharmful but of great value.

87. **Ichthalbin.**—Rolly and Saam, from experiments with ichthalbin, find that it exercises a decidedly favorable influence, causing reduced excretion of nitrogen in the urine, and increase in weight. Its action on intestinal fermentation was positive, and it was found that the quantity of ethyl-sulphuric acid was permanently reduced in all four tests. The reduction within three days amounted to from one-third to one-fourth of the original value, only to increase again on suspension of the remedy. Notwithstanding the reduction of ethyl-sulphuric acid, the dejections still retained their fetid character, which is hard to explain, as the clinical results were eminently satisfactory in other respects. They suggest that a lessening of intestinal fermentation is obtained and that calomel can perhaps be replaced by ichthalbin in children, where a purgative effect is not desired at the same time.

91. **Hyoscin.**—From his experience, Noble has formed the following opinions in regard to this drug: It is uncertain to some extent in its action, and not every case will be benefited; about two or three out of every five. In old and feeble patients, a very small dose should be used, as they are profoundly affected by it. The remedy is equally beneficial when given by the stomach or hypodermically. If after gradually increasing the dose by the mouth, up to 1/60 gr., the desired effect is not obtained, it is useless to increase it further. Frequent doses are not required, not more than two being necessary in twenty-four hours. It does not act as a hypnotic except by allaying excitement; and may be combined to advantage with chlorid and bromid. He has never obtained anything like a curative effect with it, though it has been of decided benefit in relieving symptoms. It has little effect on the hallucinations of sight and hearing. One advantage of its use is its tastelessness and the small doses in which it can be employed. If the desired results are not secured by the administration of two doses of 1/75 gr. in twenty-four hours, it is well to abandon its use. Another advantage is the relief it affords to spasmodic contraction or cramps of the muscles of the lower extremities on retiring after unusual exertion during the day. A dose of 1/20 gr. given a half hour before retiring will usually entirely overcome this trouble.

97. **Steam Sterilizers.**—From experimental researches, Dunham concludes that the steam-gauge of pressure sterilizers indicates the temperature in all parts of the sterilizer only when all the air has been expelled and the sterilizer is filled with saturated steam. The thermometer in the top of the sterilizer gives no indication of the temperature at the lower parts, and if it is to be used as a guide, its bulb should be placed close to the bottom of the chamber. For sterilization done in hospitals, the ejector is a delusion worse than valueless in getting rid of the air; for the quickest method of doing this and replacing it by steam is by having all the steam enter at the top and the air pass out through the bottom and bubble up through water until a sharp water-hammer with very minute bubbles is established. Then the air is out for all practical purposes.

109. **Treatment of Typhoid Fever.**—Garvey discusses the various methods of treatment suggested: the antipyretic, antiseptic, eliminating and antitoxin. As regards the first, he thinks that it is untenable, though if so, it is hard at first to explain why Brand's treatment shows such a low mortality. The theory that is receiving the most support is that the action of cold water is not so much to lower the temperature as it is eliminative. The intestinal antiseptic treatment has come to stay, the drugs introduced for this purpose do not attack the bacillus typhosus, but rather the intestinal toxins produced. The third system, which is advocated by Thistle, of Canada, and Thompson, of New York, consists in eliminating by attempting to carry off the toxic substances they contain by purging, etc. He does not strongly commend this, though it has its merits, but he thinks that when the antitoxin treatment comes, it will be the ideal, for serumtherapy is the treatment of the future for typhoid.

113. **Curvature of the Spine.**—The theory advanced by Galloway is that many cases of lateral curvature of the spine are due to a pelvic deformity making an inclined sacral base for the spinal column. He believes that this cause has not been sufficiently recognized in the text-books, and he illustrates from various authorities, showing the pelvic deformity and consequent spinal curvature. He claims that the pelvic distortion, which in many cases may be credited to rickets, is the original cause and not the secondary result.

119.—See The Journal of October 21, p. 1041.

125. **Appendicitis.**—Brown believes that at least 90 per cent. of all cases of appendicitis can be successfully treated by medical means according to the method suggested by Terry, of New York, which consists of cathartic doses of castor-oil with olive-oil, followed by large draughts of hot water, and later by enemas of glycerin and olive-oil. Flax-seed-poultice plasters are applied to the abdomen. The diet is light and of easily digested food. Terry claims that the oil treatment re-

lieves the friction of inflamed tissues. To prevent the return of an inflammatory process he gives 1/2 ounce of olive-oil, followed by a glass of hot water, before each meal, for several weeks. Eight cases are reported, all of which have recovered and have done well up to date.

141. **Points in Obstetric Practice.**—Kolischer speaks of the posture of the mother during labor, with special reference to presentation of the anterior vertex, and discusses the diagnosis of the condition. The mother should be placed on the side which corresponds to the fetal occiput, and should remain there until it has completely descended, so that the fontanelle is the lowest point of the fetal skull. Another point mentioned is the management of the bladder, which in cases of strongly anteflected uterus may be still half above the symphysis. It is, therefore, advisable to use the long male elastic catheter and to examine the region for fluctuation. and if this is found, the head is gently pushed back, in order to secure a sufficiently high introduction of the catheter. Another point is the protection of the perineum; and the posture of the mother is of great importance in this respect, as is also the protection of the perineum by the hand in any appropriate way. The anterior hand rests on the fetal skull and crowds it against the symphysis in order to relieve the perineum and at the same time regulate its expulsion. The other hand has to support the perineum directly. Nothing is more erroneous than to suppose that the perineum must be pushed back over the head. It should be pushed upward against the symphysis and the head rolled over it with the least possible degree of distension. If the tension of the perineum is too great, episiotomy should be performed; that is an operation that is not done often enough. The incision has to be made in the lower third of the vulva and directed toward one of the buttocks. The probe-pointed bistoury is the best for this purpose. A laceration may be expected to occur when the perineum becomes exceedingly pale and wax-like in its appearance, when the epidermis is thrown off in tiny scales, when it becomes exceedingly thin, when the lower circumference of the vulva is interrupted by a staple, or when the central part of the perineum bulges out like a balloon. If the anterior margin of the levator ani is felt projecting like a sharp ledge, it may be incised, for if the muscle bursts subcutaneously there is a permanent defect of the pelvic floor which has to be operated on afterward, while the fresh wound of the muscle itself can be repaired at once by suturing. Still another complication is premature rupture of the membranes, which protracts the labor and makes operative interference exceedingly difficult. The colpeurynter is therefore an expedient in such cases. to prevent its breaking under pressure, the bag should not be filled to its full capacity. Its presence inside the uterus produces effective pains, while at the same time it promotes a serous moistening of the cervix. It acts as a substitute for the membrane, and when there is no further use for it, it drops into the vagina. Still another point deserving mention is the use of quinin during labor. It is generally erroneously considered a pain-producing drug, but it has a singular influence on the irregularity of pain, rendering it regular and less severe.

143. **Vaccination.**—Runyon discusses the respective advantages of humanized virus points and tubes. He says that in the presence of an epidemic of smallpox, the tubes are not sufficiently sure and speedy; when it is not possible to see the patient again and watch the result, the vaccin point should be used; but when the subject has been exposed to the infection, either the humanized virus or the point. When there is full control over the subject and vaccination can be done when expedient and there is no urgency, it is well to use the glycerinated virus and follow with the point. He thinks that at least 25 per cent. of those in whom vaccination has been effective have not received full immunity.

## FOREIGN.

### British Medical Journal, June 2.

**Pathology of Acute Yellow Atrophy of the Liver.** JOHN W. FINDLAY.—This paper gives the history and postmortem examination of a case of acute yellow atrophy of the liver. In his discussion of the pathologic conditions, the author concludes that the microscopic appearances make a very complete picture and justify the reference of the case to yellow atrophy. It shows on how slender a basis the different forms of cirrhosis are classified. He supports the contention of Obrzut, that chronic yellow atrophy is nothing more than acute cirrhosis of the liver, differing from other forms only in quantitative histogenetic changes. In yellow atrophy, the degeneration of the hepatic cell is more extreme than in the ordinary type of cirrhosis, tending more frequently to death than to recovery of the cell. The connective-tissue forms differ little from those found in other cirrhosis, but the degeneration of hepatic tissue, as evidenced by the very numerous columns of hepatic cells, has gone much farther than in ordinary cirrhosis and has even outdone the so-called hypertrophic and biliary cirrhosis in what is regarded by some as its special feature. No cultures were taken from the liver or other organs in this case, but a few large bacilli were seen in the small branch of the portal vein and lying between the hepatic cell and the yellow area, which stained deeply with thionin. It seems most probable that these are the colon bacilli, which have been found by Adami in the liver in cases of cirrhosis as well as in other conditions.

**Chronic Brass Poisoning.** WM. MURRAY.—This is a type of metallic infection not usually mentioned in the literature and sometimes puzzling to the physician. Nearly all that is known of the disease heretofore is included in Hogben's article in the *Birmingham Medical Review* (1887). One person may be employed for months or years in filing or manipulating brass without contracting the trouble, while another may suffer from the very first. The main feature is anemia, accompanied by excessive debility and nervousness, with neuralgic pains and a green line at the base of the teeth. Later there are emaciation, tremors, cold sweating, cough, extreme weakness. There is also claimed to be a sort of paraplegia that occurs in the later stages. Brass is an alloy of copper and zinc in the the proportion of three to one. Murray considers the symptoms due more to the copper than the zinc, and that the severity depends largely on the amount of brass dust inhaled. As a treatment, he first tried iodid of potash, but without much success. Then, knowing that sulphate of copper is an antidote for phosphorus poisoning, it occurred to him that this last might exercise an antagonistic effect; he, therefore, tried phosphorus in 1/30-gr. doses three times a day, with results that exceeded his expectations. Later, for a change, he tried dilute phosphoric acid, 15 minims three times a day, and the effects were still more encouraging.

**Treatment of Smallpox by Salol.** JOHN BIERNACKI AND P. NAPIER JONES.—The use of salol in smallpox has been advocated by Dr. Charles Begg; and the authors report cases treated according to this recommendation. The salol is administered in doses amounting to about 60 gr. daily, or even more; and in one case, 15 gr. were given every three hours. It appears from the results of these eight cases, which are selected as being uncomplicated by previous vaccination, that salol may directly avert general pustulation and even have a partially abortive effect when given after maturation. It almost always hinders it, so that the pustules form more slowly and are more imperfect in a much higher proportion than is usual. The cutaneous inflammation is slight, and all irritation and unpleasant odor are absent. Scarring is inconsiderable and often *nil*, but the most remarkable effect of the treatment is that on the secondary fever, which becomes of little importance.

### The Lancet, June 2.

**Massage in Recent Fractures and Other Common Injuries.** WILLIAM H. BENNETT.—The use of massage in fractures is recommended by Bennett, who details the forms in which it can be of special advantage and illustrates some of the methods which are especially beneficial in relation to muscular spasm that is sometimes so troublesome in fracture of the leg. He insists that passive movement should always be preceded by smooth massage, which soothes the irritable muscles so completely that more extensive movements are readily carried out without exciting muscular contraction of a harmful kind. The great advantages of this treatment are given by him as follows: 1. The ease with which the patient is made comfortable by arresting the muscular spasm and so relieving the pain. 2. The effecting of rapid absorption of effused blood, etc. 3. The prevention of stiffness by obviating the formation of adhesions. 4. The prevention of muscle-wasting and the preservation of the normal nutrition of the limb. 5. The shortening of the time by at least one-half, during which the patient is prevented from resuming the ordinary use of the limb. The only real objections to the plan, he thinks, are: 1. The difficulty which must often arise in carrying it out, as unless a competent masseur or masseuse is available, the time required must be frequently more than the ordinary practitioner can spare. 2. The fact that it is a treatment requiring so much intelligence and discretion in the mode of its application that it may be difficult at all times to find a person to whom it may be entrusted with safety when the practitioner is not prepared to manage the details himself. The objection which has been raised on the ground that movement of the fractured bones must result is of no value if the treatment is properly carried out, as the movement is then practically *nil* and certainly not enough to prevent union in any degree whatever. As far as his experience is concerned, the results are far superior to those obtained in any other way.

**Preventive Inoculation Against Typhoid Fever.** Alexander G. R. Foulerton.—In the discussion of this subject Foulerton gives the diagrams of temperature reactions on the rabbit after antityphoid inoculations. He reviews the statistics, as far as they have been acquired in regard to the effect of inoculation of cultures of dead bacilli of this disease, which seem to show that the method is of real value. The exact length of time the protection may last is not known, but if we accept the persistence of agglutinative power as an indication, the immunity lasts for at least two years. The immediate effects of the inoculation may be unpleasant, but they are not permanent, lasting only a few hours, and with never any more serious result than a short period of discomfort. He thinks that the use of this method would be very advantageous to nurses and others who are especially exposed to the disease.

### Medical Press and Circular, May 30.

**Indications for Removal of Uterine Appendages.** J. MacPherson Lawrie.—This author sums up the views expressed in his paper by saying that the ovaries and tubes require to be removed in the following condition: Chronic ovaritis, salpingitis, and cystic disease of the ovaries, when palliative methods have failed to afford relief; suppurative disease of the ovaries and tubes, i. e., pyosalpinx, tubo-ovarian and ovarian abscess; fibromyoma of the uterus of moderate size, either when the ovaries are diseased, or when the patient has been so debilitated by prolonged hemorrhage that hysterectomy would be especially dangerous; and tubal pregnancy. Mere neurosis, apart from organic disease, is not to be regarded as an indication for oöphorectomy under any circumstances. Further, he believes that mere puncture and resection of the ovaries and tubes is, in most cases, inefficient and satisfactory, and that for pyosalpinx, the abdominal route is usually preferable to the vaginal.

### Indian Medical Gazette (Calcutta), May.

**Serum Treatment of Leprosy.** W. A. Lee.—After noticing the apparent good results claimed by Carrasquilla and Laverde, Lee reports his own experience with the Carrasquilla serum. He claims that it has been remarkably efficient in malignant cases of tuberculous leprosy where fresh nodular eruptions appear at frequent intervals and grow luxuriantly, forming diffuse, smooth, shiny infiltrations on the face and ears, the eruption being attended with a temperature ranging from 102 to 104 F. Only two such cases have been met with in the past six months at the Government Leprosy Hospital at Madras, of which he is superintendent, and each was injected with the contents of a vial of Carrasquilla serum equal to 9 c.c., with the result that fever quickly abated and the tubercular infiltration in the more severe case rapidly disappeared, leaving the skin shrunken and flabby. This patient has maintained improvement for three months with gain in weight and strength. In the milder case, the changes were less notable. though improvement was also observed. He admits that the advantages claimed for the serum may possibly be equally well obtained from the use of other albumin derivatives; for example, the watery extract of pure culture of bacillus pyocyaneus, injections of which excited marked febrile reaction in tuberculous and leprous patients. In an experiment made with Haffkine's prophylactic serum, on a nodular leper child, the usual reaction followed and no fresh tubercles have appeared for nearly two years. His observations show, however, that a febrile reaction is not necessary for the good effects of the Carrasquilla serum.

**Metamorphosis of Filaria Nocturna in Mosquitoes of Anopheles Genus.** —S. P. James.—The purpose of James' article is to point out that the mosquitoes of the Anopheles type are hosts of the Filaria nocturna. His reasons for thinking that this, rather than the Culex, is the efficient host, are as follows: 1. Anopheles mosquitoes do not bite during the daytime—as their meals of blood are practically always taken during the night, i. e., when the filarial embryos are circulating in the blood—while Culex mosquitoes will feed at any time. 2. Anopheles mosquitoes collect many more embryos in the blood which they extract than do Culex mosquitoes. 3. The filariæ appear to undergo their metamorphosis with more ease and at a quicker rate in Anopheles than in Culex. This is evidenced by the fact that at no time during their development in Anopheles is motion suspended in the filariæ, and, in this climate, their metamorphosis in this genus of mosquito is complete in from twelve to fourteen days. 4. In the places in Southern India where filariasis is most common—Shertully, Alleppey, Cochin and other places in Travancore—the Anopheles genus of mosquito is more common in houses than is the Culex. The food of Anopheles appears to consist principally, if not entirely, of blood, as he has not been able to keep them alive on bananas or other vegetable food for any length of time. as can be done with Culex. 6. In two species of Anopheles with which he experimented, both were found to be efficient hosts, and it seems not improbable that other species of this genus would be also. He had considerable difficulty in breeding the Anopheles, but finally succeded. He does not consider this method of infection by Anopheles as frequent, since a man, under his observation, infected with filariasis, had lived for ten years with his wife and two children in a small one-room hut that was also the home of numerous mosquitoes, but neither the wife nor children have filaria in their blood.

### Bulletin de l'Academie de Medecine (Paris), May 22.

**Filariasis Inoculated by Mosquito Bites.** P. Manson.—This first communication from the newly-elected foreign correspondent of the Académie announces that man is inoculated with the filaria sanguinis by the bite of the mosquito. Manson incriminated the mosquito twenty years ago, but it was assumed that the insect sucked the embryos from man, and dying as it deposited its eggs in the water, the larvæ were liberated and ingested by man in drinking-water. His recent research shows that the embryos sucked with human blood as the insect bites migrate in its body to the most fully developed muscles. which are those of the neck and thorax, and pass thence into the proboscis, in which they are accumulated by the twentieth day, and are then transferred to man as the insect bites. Grassi has established that the mosquito does not necessarily die, but may survive after laying her eggs. The larvæ are deposited thus in the skin or lymphatics, where they complete their sexual evolution and mate. The resulting embryos are swept away by the lymph into the blood. This explains the primary localization of filariasis in the skin, the variability of the site, the elephantiasic lesions, and the appearance of the young forms in the blood. Several hundred mosquitoes were collected for Manson by Dr. T. L. Bancroft, in Australia—the ordinary "house mosquito," Culex ciliaris, supposed to be identical with our own Pipiens. They had been allowed to bite a patient with numerous filariæ nocturnæ in his blood, and were kept alive until killed with fumes of cyanid or chloroform at intervals of from one hour to twenty-five days. They were then admirably preserved in pure glycerin and dissected by Manson and Low at the London School of Tropical Medicine.

### Echo Medicale du Nord (Lille), May 27.

**Varnish for Surgeons' Hands.** Mariau.—Numerous and comprehensive tests have shown that a varnish, composed of alcohol, lac and resin, forms an impermeable covering for the hands, preserving them from contact with septic matters in operating, and also ensuring asepsis—as far as the hands are concerned—in aseptic operations. Mariau's varnish is extremely adhesive and supple. does not break from any movements of the hands, and does not interfere in the least with the sense of touch.

### Presse Medicale (Paris), May 26.

**Osmonocivity.** LESNÉ AND BOUSQUET.—This term represents the sum-total of the toxicity and lack of isotony between fluids, referring more particularly to the effect of human urine in experimental research. The writers claim that determining the toxicity of the urine alone, regardless of the isotony, leads to erroneous conclusions. They also insist that in deciding the toxicity of the urine, it is impossible to estimate in simple and general formulæ the complex biologic phenomena manifested in the death or survival of the animal. It may be possible, perhaps, to represent the osmonocivity of a simple solution with a given figure, but not of the urine, which contains multiple toxins in various amounts, with some of which we are not yet acquainted. Even isotonic correction can not apply with mathematical accuracy to a fluid as complex as the urine, and we must not expect too much from it.

### Progres Medical (Paris), May 26.

**Sclerosis in Patches Commencing in Childhood.** BOURNEVILLE.—Only four cases of this affection commencing in childhood have been observed at Bicêtre during the last twenty years. One is described in full in this communication. The child was normal until his third year, although the father was a drinking man and the mother nervous. A fright at this time was followed fifteen days later by a severe attack of convulsions, lasting thirteen hours, then torpor for twelve days, and symptoms of pronounced cerebrospinal insular sclerosis developed, with moderate imbecility and epileptoid seizures. In Bourneville's experience, sclerosis of this kind commencing in childhood has a much slower course than when it appears later in life, and it may be accompanied by spasmodic paraplegia. A peculiarity of the present case is the predominance of the tremor and paralysis on the right side. Medico-pedagogic treatment produced much improvement and remissions were frequent. Arrived at manhood, the patient applied for military service, but a recurrence of symptoms, from lack of the douches, etc., to which he had been accustomed, resulted in his discharge in three months, and he is now in the incurable ward at Bicêtre. Bourneville urges that special regulations should be decreed for incurable imbeciles, allowing them only partial liberty, even during remissions, to prevent their becoming tramps or the tools of criminals.

### Semaine Medicale (Paris), May 23.

**Bruit de Galop.** POTAIN.—The absence of the *bruit de galop* in normal conditions is due to the elasticity of the walls of the aorta. When the artery becomes less resistant, from atheroma, or loses its tone, as in typhoid fever, the wall either stretches too quickly or resists too soon, arresting the expansion of the artery and producing the *bruit de galop.* When the sound is very distinct on the left side, it is almost always connected with a dilatation of the heart, accompanying the generalized capillary arterial sclerosis of Bright's disease. Less distinct *bruit de galop* is noted in many febrile affections, particularly in typhoid fever. It indicates a certain degree of atony of the heart. When the sound is heard on the right side, it is a sign of dilatation of the right ventricle, frequent in dyspepsia from any cause. When noted with uremic dyspepsia accompanying a catarrhal nephritis, it is important to distinguish it from the same sound heard on the left side, which would indicate arterial sclerosis and concomitant interstitial nephritis, with an entirely different prognosis. In the same way, it makes a great difference to a chlorotic patient whether the *bruit* indicates merely a dyspepsia usually curable, when heard on the right side, or on the left, an interstitial nephritis which renders the prognosis much more serious. The *galop* of pericarditis must also be distinguished, as the participation of the myocardium in the pericarditic lesion indicates future danger. When the *choc* and the *galop* are heard in pericarditis, they indicate dilatation of the right cavities, especially deplorable when there is a tendency to symphysis, as without dilatation the symphysis may remain latent from the functional point of view. The systolic arterial *bruit de galop* is an element in the prognosis of the existing affection. In order to deduce these conclusions, the *bruit* must be carefully studied and, above all, not be confounded with the various double sounds.

### Muenchener Medicinische Wochenschrift, May 22.

**Intracranial Complications of Acute Otitis.** BEZOLD.—Three observations are described, showing the severity of the intracranial complications which may occur insidiously in the most apparently harmless acute suppurative otitis media. They also impose the necessity of a close watch for the slightest ominous symptom, such as retarded pulse, optic neuritis, vertigo, etc., that surgical intervention may not be too late. This liability to serious complications is due to the anatomy of the parts, especially the variable development of the pneumatic cells, which in some persons honeycomb the temporal bone, while altogether absent in others, except the mastoid cells proper. It is impossible for us to determine positively during life the existence of extensive cells, but we can surmise their presence when an acute otitis persists an unusual time, and especially when the hearing returns nearly to normal in spite of the continuous discharge. A large cell of this kind in the floor of the mastoid portion, in front of or behind the digastric fossa, is the cause of the deep abscesses in the neck, below the mastoid process, as the pus descends by gravity. In the first observation, the symptoms appeared suddenly in the fourth week of an otitis affecting a hitherto sound ear, and indicated sinus phlebitis, pyemia and metastasic foci in the lungs. The lateral sinus was found filled with fluid pus and thrombi as far as the jugular bulb. In the second observation, a putrid abscess in the soft parts of the neck complicated an acute otitis media consecutive to erysipelas. In the third an abscess in the posterior portion of the temporal lobe communicated with a fistula inside the dura, which allowed the passage of pus through the mastoid-parietal suture, resulting in the formation of an external subperiosteal abscess 1 cm. behind the auricle. The primary temporal abscess probably originated from perforation of the tegmen tympani. The three patients promptly recovered after surgical intervention. The jugular vein was ligated in the first two cases. Bezold considers this a harmless measure in practiced hands, and one necessary to prevent further infection from this source.

### Wiener Klinische Wochenschrift, May 3, 10 and 17.

**Sacral Extirpation of Carcinoma of the Rectum.** J. HOCHENEGG.—Nearly thirteen years have passed since Hochenegg first removed carcinomata of the rectum through the sacrum. He has now an experience of 121 cases thus treated, and 50 similar operations for other lesions. Excluding 4 deaths from embolism of the brain, bronchitis or some other cause not connected with the operation, his mortality has been less than 5 per cent., and 21 out of 62 patients survived more than three years. The first patient, operated on in 1887, is still in good health. There have never been any injurious results from the sacral operation, and one patient has since borne two healthy children. The operation does not require any preliminary purging; he found that formed feces were less detrimental to the wound than artificially softened discharges. He operates in cases farther advanced than others consider practicable. In two, that seemed absolutely hopeless he obtained a permanent cure. In three others he was compelled to refrain from extirpation and conclude with a palliative procedure, after opening up the neoplasm. Internal metastases, rigid carcinomatous fixation in the pelvic cellular tissue and extensive glandular involvement are the only limits he imposes. Adhesion to prostate and bladder, or to vagina and uterus is no counterindication, as he merely resects the involved portion of the secondarily-affected organ if the removal of the neoplasm can be done technically, without injuring the function of the remaining pelvic organs. He enucleates the coccyx under all circumstances, and resects more or less of the sacrum as required, sparing the lateral insertions of the ligaments as much as possible. When the rectum is resected, the two stumps are sutured together with the sphincter intact, as in operation on other portions of the intestines, which is the ideal operation, as normal continence is retained. If this can not be accomplished the proximal stump is brought through the sacral wound and an artificial anus is established, or through the natural anus and sutured to the skin outside. The peritoneum has to be opened to mobilize the rectum for these maneuvers. The slit is closed at once with silk stitches, and not until this has been done is the carcinomatous portion resected.

**Descendants of Hereditary Syphilitics.** E. Finger.—This comprehensive article was prepared at the request of the committee of organization of the approaching international congress of dermatology and syphilology. The author admits that it is theoretically possible for the first, second and even later generations to present manifestations of hereditary syphilis in the form of: 1, true, virulent syphilis; 2, syphilotoxic, dystrophic disturbances; or 3, immunity; and that they may exist independently or associated. But, in respect to the inheritance of true, virulent syphilis in the third generation, none of the twenty-four cases on record is absolutely unimpeachable. For this, three conditions are indispensable: hereditary syphilis in one of the parents, absolute exclusion of acquired syphilis in the second generation, and the unmistakable hereditary nature of the syphilis in the third. None of the cases on record combines all these conditions, although several are very remarkable. Only a case like the following would be absolutely conclusive: for a hereditarily syphilitic mother to bear a hereditarily syphilitic child and soon after its birth the father of the child to become infected with syphilis outside of the family. The question of hereditary dystrophic disturbances is still more unsettled, as they have no specific syphilitic character, and analogous disturbances occur in families free from any taint of syphilis, tuberculosis, alcoholism and lead-poisoning. They are also less frequent in children with true inherited syphilis than in those without. General nutritional disturbances, defective vitality, debility, infantilism, etc., undoubtedly occur as the result of syphilotoxic influences affecting the children of syphilitic parents, and also the rarer partial "dystrophies," but in the latter case the question whether they might not have happened without syphilis on the part of the parent arises. Dystrophic disturbances have also been known to occur as the result of syphilis acquired early in life. A conclusive case would be one in which hereditary syphilis was established in the second generation, while the acquired was absolutely excluded, either from infection of the sound or reinfection of the syphilitic. Syphilis acquired early in the third generation would also have to be rigorously excluded. From this standpoint the thirty-one cases on record are worthy of consideration, but are not absolutely convincing. The weak link is the exclusion of acquired syphilis in the second generation. In respect to the transmission of syphilotoxic dystrophic anomalies, the evidence shows that they become less frequent and milder in succeeding generations. On the other hand, the polylethality, the procreation of non-viable offspring, continues practically undiminished throughout the second and third generations, indicating that syphilis in its effect on successive generations entails decimation rather than degeneration of the race. In respect to the generally accepted doctrines of immunity, critical analysis shows that they are based more on tradition than on scientifically established facts, and that they need comprehensive revision. Our present assumptions in regard to immunity are contradicted by the comparatively brief duration of immunity even with acquired syphilis, the reinfections which come under our observation, and the reflection that such reinfections would be more common than they are if social and other factors did not combine to prevent them, such as prudence, routine, marriage, age and impotence. There are 14 cases on record in which syphilis was acquired by heredo-syphilitics; in 137 by syphilo-dystrophics, and in 29 by the sound children of syphilitic parents. The reports show that the acquired infection in their case was no milder than usual. The fact that so many children of syphilitic parents have lost their immunity by the age of puberty, if it ever existed, is a proof that this immunity can not be transmitted to their descendants. Finger questions whether we are justified in affirming unlimited, i. e., life-long, immunity even after acquired syphilis, and still less, the transmission of immunity to the children.

**Resuscitation an Hour After Apparent Death from Suffocation.** J. Prus.—Large numbers of dogs were revived by maneuvers commenced from a few minutes to an hour after death from suffocation, chloroform intoxication or an electric shock. Prus believes that the same method applied to man promises equally favorable results. The circulation was artificially re-established by direct massage of the heart, exposed for the purpose through an opening in the thorax, supplemented by injection of salt solution in the centripetal end of the femoral artery. Respiration was re-established by means of a bellows communicating with the trachea. Regular, energetic action of the heart was restored after an hour's work, and during the third hour after death, the cutaneous and corneal reflexes returned and also spontaneous movements. Of 44 dogs killed by suffocation, 83.33 per cent. were thus resuscitated. One is still alive, a year later; the rest either succumbed to infection after a few days or were killed for purposes of research. The 21 animals killed with chloroform were treated in the same way, with successful resuscitation of 76 per cent.; the manipulations commenced after a maximum interval of an hour. The experiments with animals killed by electricity were less favorable. A paralysis of the heart seemed to have been induced, that was impossible to overcome, except in 14 per cent. The only experience with man was with a suicide by hanging. When first seen, about an hour had elapsed since death, but massage of the heart through an opening in the thorax restored independent rhythmic contractions of the auricles, and systole in the form of a wave propagated from the limits between the auricle and ventricle toward the auricular appendage. Suitable apparatus for artificial respiration could not be procured. The contractions of the heart became weaker and the signs of life gradually subsided after establishing the important fact that it is possible to stimulate the human heart to independent action two hours after apparent death.

**Thyroid Treatment of Cretinism.** W. von Jauregg.—The benefits from thyroid treatment of cretinism are no longer questioned. Nothing remains now but to determine the degree of improvement possible to be attained with it. The treatment must be kept up indefinitely, as its aim is to supply the missing function of the thyroid gland, and consequently it should be taken all through life, although less frequently after the first months. The results are more satisfactory the earlier treatment is commenced, and it should be instituted on the first suspicion of cretinism, Every child who seems unusually backward should be put on thyroid medication for a few months. If he makes marked progress the necessity for its continuance is indicated. Among the effects of thyroid treatment of cretinism the most striking is the improvement in the psychic and nervous functions. The reported cases show that the patients increase in height; the myxedema disappears; the fontanelles close; the teeth develop; the genital organs and menstruation tend to become normal; the distended abdomen recedes, and with it the umbilical hernia; the stiff, cretin hair falls out and soft hair grows in its place. The body temperature becomes normal, and the patient is transformed into a lively, interested and even talkative child or adult. The intelligence is improved, but sufficient time has not yet elapsed to determine the full effect of thyroid treatment on the development of a brain stunted by years of defective thyroid functionating.

**Wedge Osteotomy of the Tibia.** L. Luksch.—The Meyer-Schede wedge-shaped excision of the tibia and fibula in the treatment of genu valgum is more extensive than need be. Luksch points out that after excision of the wedge from the tibia—the point toward the fibula—the cut edges fit together perfectly, and the fibula adapts itself to the new position without requiring to be shortened, and affords a desirable support for the tibia. In case of genu varum, the wedge is turned with the broad end toward the fibula, which therefore has to be shortened. But, instead of resecting it at the weak point of the excision of the tibia, Luksch proposes oblique osteotomy farther down, between the middle and lower thirds. The sloping edges can be slipped along on each other until the bone is sufficiently shortened.

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## Original Articles.

### ABDOMINAL VS. VAGINAL HYSTERECTOMY FOR UTERINE CARCINOMA.

BY JOHN B. DEAVER, M.D.

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PHILADELPHIA.

The choice of routes for hysterectomy must be selected for each case. It is my desire to present a concise résumé of the reasons for each route, and the advantages which it offers in the cases to which it is applicable.

The views laid down are those of a general surgeon, and are based upon an experience in this work that justifies him, I think, in offering an opinion.

It has been claimed that vaginal hysterectomy is an operation that requires special training, and such an attention to detail and technique as can be acquired by the specialist alone. I can not, however, allow this statement to go unchallenged, for I believe that the general surgeon, with his larger field and constant application to detailed technique is, at least, equally as well equipped to perform every operation of gynecology as is the specialist himself.

What surgeon to-day, except in extraordinary instances, would dream of amputating a carcinomatous mammary gland leaving *in situ* the axillary chains of lymphatics whether they are macroscopically infected or not? Yet, how many of the leaders of gynecology recommend or themselves perform the complete operation for carcinoma of the uterus? Carcinoma of the uterus is a very common disease, not more so to-day than formerly, but with increased knowledge and diagnostic skill we are able to discover and remove in good time, uteri that otherwise would soon end in the destruction of the patient.

The synopsis of this paper shows the position I take upon this most important subject. I favor and perform abdominal hysterectomy for the great majority of cases of uterine carcinoma, although I grant there are cases where the vaginal operation may be the better. That the vaginal operation offers any advantages over the abdominal route is with me a question. I know of no condition supposed to indicate vaginal hysterectomy which can not possibly be better dealt with by the abdominal route.

For the sake of clearness and logical reasoning I propose to take up the different points for discussion in the order laid down in the synopsis.

#### THE REMOVAL OF THE PELVIC GLANDS.

For the purpose of refreshing our memory I give a brief account of the lymphatic glands and their connecting channels which are involved in the morbid processes of the uterus: The superficial lymphatics of the uterus, together with those of the ovaries and Fallopian tubes, empty into the lumbar glands. They lie beneath the peritoneum and are joined by those from the substance of the fundus and upper portion of the body of the organ; together they run outward in the broad ligament, where they are joined by the lymphatics from the ovaries, Fallopian tubes and vagina, whence they pass up, with the ovarian vessels, to the lumbar glands. The lymphatics of the lower part of the uterus and from the cervix of the uterus run with most of the lymphatics of the vagina along the course of the uterine and vaginal vessels, and terminate in the internal iliac glands. The lymphatics from the lower part of the vagina join the superficial inguinal glands.

We therefore have two chains of lymphatics in each median half of the uterus to consider, and while the chains nearest the disease are probably engaged in draining the part, it is not unusual to have both the upper and lower chains on one or both sides involved necessitating their removal if we wish to give the patient the only possible hope of recovery.

In late carcinoma, or even in the early stage of rapidly advancing disease, if there is, macroscopically, involvement of the broad ligament, any operation short of total extirpation of the lymphatics of the pelvic organ would better not be attempted. The abdominal operation offers the only way by which we can perform such a complete hysterectomy. The incision must be a long one; the intestines and omentum must be kept away from the field of operation by gauze packing; the wound must be widely retracted, and the light should be good, in order to perform so delicate and intricate an operation.

#### BETTER AREA FOR COMPLETE EXTIRPATION OF CARCINOMATOUS TISSUE.

The reasons given for the first heading hold good for the second. I can not conceive of skill so great as would make a dissection of a carcinomatous broad ligament as easy or as complete through the vagina as by the abdominal route.

#### LESSENED DANGER TO URETERS.

The weak spot of vaginal hysterectomy has always been the danger of injury to the ureters. As a matter of fact, the ureters are in danger of injury by either route; but it seems to me that the danger is less by the abdominal route, for the evident reason that one can see what he is doing, and is therefore enabled to protect these important structures. Granting that either ureter has been torn in removal of the carcinomatous uterus, the repairing must be done through an abdominal incision, and if it has [illegible] course [illegible]inal hysterectomy the a[illegible] op.

### CATHETERIZATION OF URETERS UNNECESSARY.

It has been recommended by some of the advocates of vaginal hysterectomy that the ureters should be catheterized as a preliminary step. If for no other reason than this I prefer the abdominal route. From unpublished evidence which I have been able to collect, this step—catheterization of ureters—of the operation is almost as frequently a failure as a success. This uncertainty, combined with the actual danger of kidney infection and the injury to the urethra from overstretching, is a strong argument with me against the vaginal route. I can not, however, grant that catheterization of the ureters is an essential part of vaginal hysterectomy. Where the broad ligaments are involved in the carcinomatous process, if only to the degree of being slightly rigid, it is extremely difficult if not impossible to make out the ureters. Under these circumstances catheterization would be wise were it not for the fact that such cases if not attacked through the abdomen would better be left alone, as incomplete operation offers nothing to the patient, in fact hastens the progress of the disease.

### LESSENED DANGER OF HEMORRHAGE.

There is undoubtedly greater danger of hemorrhage in vaginal hysterectomy for carcinoma of the uterus; although hemorrhage is liable to occur in either operation, on account of distorted, displaced or degenerated vessels. It is simply the increased facility for seeing the locality of hemorrhage that gives the advantage to the abdominal method. In vaginal hysterectomy we are workng at the bottom of a dark passageway; and when, in addition to this, the field of operation is covered with blood, accuracy in manipulation is out of the question. Ligation of the ovarian and uterine arteries is a very simple matter in abdominal hysterectomy, on account of the ease with which the site of operation can be exposed.

### SUBSEQUENT HEMORRHAGE LESS LIABLE TO OCCUR.

The better command of the field of operation secured by the abdominal route makes the placing of the ligatures on the vessels so much more accurate and secure that subsequent hemorrhage is not only less liable to occur but as a matter of fact is a very rare accident. When it does occur we can, with good reason, suspect the ligature material or carelessness.

### DANGER OF INFECTING PERITONEUM LESS.

The use of the Trendelenburg position with occlusion of the general peritoneal cavity and its contents by gauze packing minimizes the risk of infection. In vaginal hysterectomy the intestines are liable to come in contact with fingers, instruments, ligatures, etc., that have traversed the vagina, which, in cases of carcinoma or in any inflammatory or infectious disease, is never rendered sterile. In fact I have very serious doubts as to the sterilization of any vagina. It is claimed that the upper portion is normally sterile, but a vagina which is patulous and which is not virgin, is, as far as I know, a fertile soil for pathologic organisms, although they remain inactive, pathologically speaking, until circumstances arise favoring active life.

Under this heading comes the question of drainage. I believe that most of the cases of abdominal hysterectomy should not be drained. When, however, drainage is needed it should be supravaginal. Vaginal hysterectomies call for gauze drainage in all cases.

In total removal of the uterus whether by the vaginal or abdominal route, there is danger of prolapsing bowel; but by the more perfect closure of the peritoneum from above the danger is lessened in the latter method. The abdominal incision makes a subsequent ventral hernia a possiblity to be considered; but with the layer-to-layer suture and careful approximation of muscle to muscle and muscle-sheath to muscle-sheath, the danger is practically nil.

Vaginal hysterectomy is an operation which presents no special difficulties in the class of cases to which it is applicable. It is aplicable only in those cases where the carcinomatous process is confined strictly to the vaginal portion of the cervix, the cervical or uterine canal, and where the uterus is freely movable. In cases where there are adhesions fixing the organ, or where there is or has been inflammation or fixation of the appendages, the abdominal operation is safer, easier and a more rational procedure. Any enlargement of the uterus vastly increases the difficulties of the operation and offers another objection to vaginal hysterectomy.

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# INTRACRANIAL PRESSURE.

## RELIEF IN NON-TRAUMATIC CASES WITHOUT LOCALIZING SYMPTOMS.

BY WILLIAM N. BULLARD, M.D.
BOSTON.

Trephining of the cranium in cases of injury has now become so common that the general indications are fairly well known. The number of head injuries which now demand operation has increased greatly in the last few years, before which time only compound depressed fractures were so treated.

I wish to call attention to certain non-traumatic conditions in which operation is useful. It has long been known that in cases of increased intracranial pressure due to tumors, trephining, especially when combined with opening of the dura, may afford great relief from pain and general pressure symptoms.

I do not think, however, that it has been made sufficiently plain that this treatment—trephining with such additional operation as may be needed—is often advisable in cases of increased intracranial pressure when the cause of the increase is uncertain. In cases of intracranial tumor, the trephining has usually been done to relieve pain. In trephining in such cases, however, we should consider that we are relieving an excessive intracranial pressure of which pain is only one symptom.

In most cases of intracranial tumor, where the opening is not undertaken with the hope or expectation of removal of the growth, but merely to relieve the intracranial pressure, it is well understood that this relief is likely to be but temporary. There are, however, other cases of excessive brain-pressure, in which we have no evidence or insufficient evidence of the presence of new growths, in which the relief of this pressure by operative procedure is indicated and without necessarily temporary results. In those cases in which the cause of the excessive intracranial pressure is not apparent and in which a slow-growing intracranial tumor may be present, we can not say that the increased brain pressure may not recur, but we know that in some cases it does not return for a considerable length of time.

The case I am about to report is very unusual. There is no evidence of any new growth, and the relief has been complete up to the present time.

The patient was referred to me by Dr. W. M. Conant, of Boston, Jan. 14, 1898. She had already been to several other specialists without relief. She wished to have an operation performed upon her head because her present condition was insupportable and she could obtain no help from internal remedies. In other words, she was desperate. Her history was as follows: She was a married woman, American, 38 years old. Her mother is a nervous invalid, and eighteen years ago was insane for several weeks, but wholly recovered. The patient has never been strong. She had scarlet fever, whooping-cough and varicella when a child. When 13 years of age she had acute articular rheumatism for three months. About this time she was hysterical and weak. She had a cough for a year, but no hemoptysis and has been subject to cough ever since. Catamenia began at 14 years, and were very irregular until marriage, at 28. She fell on the back of her head on the ice when 8 or 9 years old, was not unconscious, but was confused for several days later. After this she had diplopia, which still continues. Her eyes troubled her much when 14 years old, and when she was 17 or 18 she was forced to leave school on this account. When 20 she again fell, striking the back of her head on a rock, and was unconscious for a few minutes. After this she was subject to severe pain in the eyes until she was 25, after which the pain became more diffused over the whole head; of late, however, the pain has been less. In January, 1896, she had an ovarian cyst on the right side and the right Fallopian tube removed. She was admitted to Adams' Nervine Asylum, June, 1896, but after twelve weeks was discharged not essentially improved.

For several years she has had, at times, a sensation in the head as if her brain were pressed upon, "crowded" and as if she were "being smothered," together with a "terrible feeling" in her head, as if she had committed some crime; but there were no delusions. During such attacks she loses all control of herself, does and says the most unreasonable things, can not keep still, walks the floor, throws herself against the side of the room, bites her arm, sometimes sobs violently; no convulsions; no loss of consciousness. She does not keep a servant, because of these attacks. They have increased in severity and frequency this winter, and now vary from once in two weeks to every day. Lately they have been especially severe during or just after menstruation. During menstruation she is apt to vomit dejections, and is subject to nausea and distress in the stomach. She takes neither tea or coffee. The bowels have been regular for six weeks, but were previously constipated.

On examination, she presented no evidence of any mental affection, was perfectly intelligent and clear-minded and showed no delusions or hallucinations. The physical examination was negative. The head was normal in size and shape, and presented no cicatrices or other evidences of injury or disease. There were no focal signs of intracranial affection. The patient was referred for examination of the eyes to Dr. Kilburn, who reported that there was some evidence of eye-strain, but no affection of the optic nerve or retina.

Aftr careful consideration, and having convinced myself that internal treatment was of no avail, I advised exploratory operation. This was performed February 10, by Dr. Conant.

The cranium was trephined on the right side, just in front of the coronal, and about an inch from the sagittal, suture, and the button removed. The dura was very tense, and bulged, but did not pulsate. The cranial opening was enlarged and the dura incised. The brain, which was very blue, protruded an inch or more beyond the cranial opening, suggesting very marked intracranial pressure. The protruding portion of the brain, which was three inches long, two broad, and an inch or more in thickness, was cut off and the wound closed without stitching the dura. The patient made an uninterrupted recovery and since the operation has had no further trouble, except slight headache.

In March, 1899, I received a grateful letter from her husband, which stated that she was still quite well and had just become the mother of a healthy child, her first, although she had been married more than ten years. In December, 1899, I saw the patient again and she was still free from all the former trouble.

In this case I have never been able to satisfy myself as to the exact cause of the excessive intracranial pressure. There was not the slightest evidence of tumor, either from symptoms or from the findings of the operation. Moreover, the duration of the affection and its essential cure, at least for the time, would exclude any rapidly growing neoplasm. Conditions such as this, while not common, are not so rare as might be supposed, and I feel sure that some are occasionally overlooked and classed under neurasthenia.

I have had another case in which the symptoms of intracranial pressure were such as rather to suggest the existence of a tumor, and, while none was found during the operation, it is quite possible that one may exist.

The patient was a Sister of Charity, 22 years old, whom I saw in consultation with her physician, Dr. J. J. Thomas,

The family history was negative, except that one brother had tuberculosis. The patient had been fairly well until about a year ago, though previous to this she had had occasional frontal headache, with some sense of pressure on the vertex. For a year she has been subject to severe throbbing headaches in the top of the head and in both temples, more severe on the right side, about twice a week. For five or six weeks there has been daily headache, but no confusion of mind. Her sight has been gradually failing since June. August 31, she consulted Dr. Kilburn, who found optic neuritis. Since then, her sight has grown worse and she has attacks of dizziness in which objects move back and forth. In the beginning of her eye trouble she had chromatopsia, objects looked red and gray. For the past three weeks intermittent diplopia has been present. She has had nausea for three or four months but no vomiting.

On November 21, she woke in the night and found her left upper extremity numb and the fourth finger stiff, so that she could not flex it. For two or three days after this the extremity felt sore and the finger was stiff. During the last week the headaches have been worse, with more pressure and sudden sharp pain in the vertex. There is a sense of pressure of the right eye inward.

Dr. Kilburn's records are as follows: Aug. 31, 1899. Right nerve-head somewhat swollen—about 1.5 D. projection. Near nasal border of disc a small patch of choroidal atrophy over which a retinal vessel passes unchanged. Oct. 24: Right nerve-head a little more swollen. V. O. U. as before, but patient says letters are not as distinct as before. November 7: V. O. D. = 6/18; monocular vertical diplopia O. D.; field normal. November 21: V. O. D. = 6/24; field normal.

The urine was essentially negative.

November 27, physical examination showed [illegible] the head on percussion, most marked on the left side; no definite paralysis of face or limbs; sensation [illegible] ished to touch and pain over left upper [illegible] over left lower extremity; heart negative; [illegible] jerks good.

December 18, headaches were [illegible] worse. Physical examination as [illegible] side of the head was more [illegible] sensation in left left lower extremity [illegible] ished.

December 30, operation by Dr. [illegible] thetized with ether; a [illegible] side, a little posterior to the [illegible] anterior edge of the trephine [illegible] to the arm center. [illegible] The opening was [illegible] toward the median [illegible] peared edematous [illegible] bulging. Posteriaparently a little more resistance, the resistant area being about three-quarters of an inch from the surface.

As it was doubtful whether or not the resistance was due to tumor, and as it was too deep and not sufficiently defined to warrant further search, the lateral ventricle was tapped and several drams of fluid removed. The cerebral tension was much relieved, and pulsation returned at once.

The patient left the hospital much improved, but later the headaches resumed, and in May, 1897, the vision was the same as in February last.

Aug. 16, 1897, the patient was seen again with reference to further operation. She had never been free from headache. After leaving the hospital she was worse for three or four weeks, then general improvement took place until three weeks before, when headaches became worse, and a week later they became severe. She was advised to re-enter the hospital if this condition did not improve.

Seen again in November, 1897, the headaches had been less severe for some weeks after August, but finally became again very severe, and she entered the hospital in October. A second operation was performed by Dr. Munro; the old wound was reopened and fluid evacuated. The pressure was not so great as at the first operation and there was no evidence of neoplasm.

Operation for the relief of intracranial pressure in cases of optic neuritis of unknown origin, apparently not organic, has been performed for me once with excellent success as regards the neuritis. The question to be determined in such cases is, what chance of recovery the patient has without operation.

### CONCLUSIONS.

1. There exist certain non-traumatic cases of increased intracranial pressure of unknown or doubtful origin.
2. Whenever such an excess of intracranial pressure exists as to cause serious symptoms, the question of its relief by opening the cranium and cutting the dura should always be considered.
3. In certain non-traumatic cases of excessive intracranial pressure, more or less permanent relief—or even cure—may be obtained by proper surgical interference.
4. In cases of acute severe optic neuritis of unknown origin, the question of opening the cranium and relieving the excessive intracranial pressure should be considered.

89 Marlboro Street.

# TYPHOID FEVER.*

BY J. H. SACKRIDER, M.D.

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It is not to be supposed that the indications for the treatment of typhoid fever could be in all cases exactly alike, yet every case requires absolute rest, perfect ventilation, good nursing and as far as possible, the avoidance of noise. The covering of the bed should be light; the sheets and pillow cases should be changed at least every day; cleaning the patient's mouth and teeth should be attended to three or four times a day, and the most perfect cleanliness of the patient and his bed should be maintained. Fluids ought to be administered freely. Nourishment should be fluid and given often but in small quantities. It is desirable not to overfeed the patient but to give the maximum amount of proper food that can be assimilated. If the fever should be of a mild nature, this may be all or nearly all that is required. If, however, the toxin is virulent, then complications will arise that require remedies to meet them.

The most important of these complications are hyperpyrexia, diarrhea, hemorrhage, pneumonia or bronchitis, perforation, peritonitis, heart failure, sleeplessness and delirium. Of these the most important is the hyperpyrexia; if this can be controlled without depressing the heart and general system, the other complications are not as severe and, as a rule, are more amenable to treatment.

The best treatment for hyperpyrexia is still a debatable question. If it is allowed to continue, malnutrition and heart degeneration are sure to follow. Water has been the best antipyretic for me to use. Since 1897 I have used cold water internally as an enema to reduce the temperature, at the same time giving sponge baths when the skin felt hot and dry, never allowing the temperature to rise above 102 F. without using the enema. The temperature of the water varies from ice-cold to 70 F., as the condition of the patient may require. The quantity varies from four ounces to three pints at each injection. This may have to be repeated four or five times a day in severe cases, but in mild cases once or twice has been sufficient to keep the temperature 99.5 to 100 F. I have a complete clinical record of eight cases that were treated with the cold-water enema and the sponge bath as the antipyretics. I will briefly give an account of two of these:

Case 1.—I was called Feb. 24, 1898, to see Miss B., aged 40, American. She had been nursing a case of typhoid fever for six weeks in a neighboring county, and had been feeling badly for ten days previous to coming home. She had headache, slight diarrhea, general malaise, epistaxis, nausea, disturbed sleep and tenderness and gurgling in the right iliac fossa on pressure. About two hours before I saw her she had a severe chill. Her temperature at 2 p.m. was 103.4, and her pulse was 130. I gave 1/10 gr. mercuric chlorid every two hours until five powders were taken, and ordered an enema of one pint of water at a temperature of 45 F., which was retained. At 5 p.m. the same day the temperature under the tongue registered 101 F. At 10 p.m. it had gradually gone up to 102 F., and the nurse then gave another enema of water at 45 F. At midnight the temperature reached 100 F., but did not go above that until 11 a.m. of February 25, when it began to rise. The bowels were distended with gas, but the application of very warm turpentin stupes gave some relief. At 3 p.m. the same day, I gave another enema, of one quart of water at 40 F. I also gave 5 gr. of salol every six hours, pepsin 5 gr. and subnitrate of bismuth 10 gr. every four hours. The sponge bath of cold water was used freely every half hour or hour if the temperature began to rise. Nourishment consisted of milk, rice water, crust coffee and meat juice.

It will not be necessary to describe in detail the progress of this case, as each day was nearly a repetition of the preceding day, with the exception that the enemas were not needed as often toward the close of the disease, so that one enema a day—with the cold water sponging—was all that was necessary to keep the temperature at 100 or below. At any time when it was nearing 102 the cold enema was given with prompt and decided relief. This case made a good recovery and the patient was discharged on March 24.

Case 2.—I was called July, 1898, to see Mrs. L., who had been feeling ill for about a week. She had been away from home on a visit, and, typhoid fever having made its appearance in the family where she had been visiting, she came home with the following symptoms; severe diarrhea, almost unbearable, frontal headache, acute bronchitis with dry harsh cough, sick at the stomach, delirious tongue dry and brown, pulse 140, and at 9 a.m., July 1, a temperature of 104 F. I ordered hot application of flaxseed to the chest, and a cold-water injection; the latter was not retained. An enema of one teaspoonful of starch-water with 15 drops of tincture of opium was given; and in one hour the cold-water enema (one pint) was repeated; this time it was retained. At 4:30 p.m. the same day the temperature was 102 F., and the patient was resting quietly. At 10 p.m. an enema of nearly one quart of water at 40 F. was given. Applications to the chest were continued, and 1/5 gr. of codein was given every four or five hours. At midnight the temperature was 100 and the pulse 110. During the remainder of the night the patient slept fairly well, something she had not done—she said—for more than a week.

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*Read before Fourth District Branch New York State Medical Association, Buffalo, May 8, 1900.

On July 2, at 9 a.m., I found the patient quiet and resting, the delirium gone, the cough relieved, expectoration free, the temperature 100.5, and the pulse 100. A cotton-batting jacket was ordered in place of the poultices. Pepsin, 5 gr., and bismuth, 10 gr., were given every four hours, and salol 5 gr. every four hours. The bowels were very loose, but were kept under control by using, when necessary, 10 to 25 drops of the tincture of opium, in thin starch-water.

In looking over the nurse's notes I find that this patient received on an average of two enemas of cold water a day for seventeen days, with the most beneficial results. The temperature was always kept below 102 by means of cold water. This patient also made a good recovery and was discharged August 13.

The six other cases I would speak of briefly as a whole: One was a child of 6 years; one a woman of 60, and the others were of middle age. They were all treated with the cold or tepid sponge bath, whichever gave them the least discomfort; and all were given the cold-water enema. No bad results came from its use. One case of hemorrhage was promptly relieved by the enema of ice-cold water. Where the diarrhea was persistent it was controlled by the starch-water and tincture of opium. A little brandy was used in one case only, for the relief of temporary heart failure, while strychnia was used in several.

I wish to speak in particular of sleeplessness accompanied with restlessness and a tendency to exhaustion and delirium. The cold enema relieves this condition quickly and completely.

In closing these few remarks, I desire to say that early antisepsis of the gastrointestinal tract is greatly to be desired. A few doses of chlorid of mercury were used in all of these cases, followed by salol, for a longer or shorter period of time.

Whether the cold-water enema has an antiseptic action on the typhoid bacillus I can not say, but I do know that its use is followed by a rapid decrease of temperature and great comfort to the patient.

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# SHOULD THE DENTAL STUDENT BE EDUCATED INDEPENDENTLY OF GENERAL MEDICINE?*

BY G. V. I. BROWN, M.D., D.D.S.
MILWAUKEE, WIS.

Only yesterday one commonly heard the statements: "These dental college graduates don't amount to anything, they are too theoretical; it is the practical man who learned in an office and never went to college that can fill teeth." "What's the use of a dentist studying anatomy and physiology and such things? He wants to learn to extract and make plates and put in fillings and not waste time on studying theory." A brief day finds all this passed away, profession and laity both demanding the degree of Doctor of Dental Surgery, as at least a certificate of proper study and attainment.

Again we note the same old spirit giving out the idea that too much study of medical branches makes a less efficient operator, that such work must be curtailed in order that more time may be devoted to purely technical training, and every consideration subordinated to development of the mechanical side of the subject. But the tide of advancement is even now setting in and with the weight of accumulating information is forcing the need of broader dental education along the line of general medicine. Already the layman of the better class looks for the M.D. to add assurance of reliability that to him the D.D.S. unattended does not represent. To claim that the dentist needs a knowledge of anatomy, but that his knowledge should stop at a given point, because he does not require a more extended study of the subject, and is in fact better without it, would seem to be strange logic, and yet—ridiculous as is this proposition, contemplating, as it does, the isolation in treatment of a limited part of that wonderful anatomic structure, the human body, from all its other portions, when its very fundamental principle is the harmonious co-operation of every division, whether great or small, with each and every other one—this is exactly what the advocates of dental, to the exclusion of medical, education for students of dentistry are, wittingly or unwittingly, undertaking to do.

It ought to be a matter of surprise that a paper having the title of this one should be called for by members of the dental and medical professions, so-called—for we know that these two, which at most ought only to be recognized as distinct factions of the same professional body, are not commonly so understood. While the current stirred by the movement of vastly increasing realization of the importance of anatomic, physiologic, clinical, histologic, pathologic, bacteriologic and therapeutic considerations in relation to the oral cavity and to even the simplest of those operations which contemplate the preservation of teeth and other organs associated with the mouth, the relative interdependence of other organs, or even the entire human organism, on the healthful condition of these special ones in the performance of their proper functions, has done much to broaden the dentist's field of operation, yet there is in some quarters a decided tendency to limit it, despite the very apparent need of its extension.

The colleges that have been conducted independently of medical colleges point with pride to the record of their achievements. They can and do truly say, "we have been the chief factors in making dentistry and the dentists of America the best in all the world." Grant this, and still may it not be possible that, in the evolution of the educational system of a great profession, the time has come for something better, for a curriculum which, embodying all that the specialization and technical training has beneficially accomplished, shall yet become so broadened as to include the scientific study that a thorough knowledge of medicine demands and which has become imperative to dentistry in view of the requirements of an educated public?

Notwithstanding all contrary efforts, several factors are working to [illegible] the education of medical and dental stude[illegible] the [illegible] of universities [illegible] is [illegible] among these influ[illegible]on becomes apparent, as daily the common relationship of diseases of the mouth to general disorders of the system is shown in the dispensary and infirmary work, and each student becomes impressed with the idea of the futility of treatment without due consideration of this fact in a large proportion of cases. Friendships and mutual respect thus born make easier the practice of this principle. The division of expense makes possible a better class of teachers and better instruction for a limited number of dental students.

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*Presented in a Symposium on Dental Education, before the Section on Stomatology, at the Fifty-first Annual Meeting of the AMERICAN MEDICAL ASSOCIATION, held at Atlantic City, N. J., June 5-8, 1900.

Last, but by no means least, the public, being educated through the press and otherwise, are now more and more concerned with the grave character of pathologic oral conditions, and seek rather one who deals with such than an artisan who rivals the jeweler in his accomplishments, to the exclusion of such considerations.

Time and inclination are, after all, the essential points. The former must be gained by lengthening of required periods of study before graduation, the latter is an outcome of natural development stimulated by such influences as may be brought to bear upon the colleges, students, profession and laity. In my paper read before the National Association of Dental Technics, the actual number of hours possible to be devoted to each branch of study was estimated under the seven-month term, and it was clearly shown that only a bare smattering was practicable, and that the need of a longer period of study was most urgent.

The plan of having a four years' medical course precede the study of dental branches is impracticable; the age of the student, after allowing for the necessary years of preliminary study, would in most instances be such as to make the matter of manual training and the acquirement of sufficient technical dexterity much more difficult and uncertain than at an earlier age, whereas on the other hand, the more matured mind is better able to understand the science of medicine.

Dentistry, while a special branch of medicine, just as the eye, ear, gynecology, or any other of the recognized divisions, differs from each, and the overruling of this fact must surely tend to its disadvantage, but there is no good reason why the study of medicine during the first two years can not be supplemented by a thorough training in operative and prosthetic technics, or general anatomy by special dental anatomy. Nor can there be any objection to continuing, during the summer months, practical operations in the mouths of patients under the direction of demonstrators in the college infirmary, where the student can be steadily employed in filling teeth, constructing crowns, bridges and dentures and in performing all the operations of dental practice in order that he may, during the winter session, devote more time to the studies of his third year in medicine, without interfering with the regular requirements for dental graduation, and the following year receive a degree in medicine. Such a student, although completing the work in four years, has had seven full courses of instruction, and therefore, much more practical experience and study than could be possible during the regular winter sessions alone; at the same time his study of medicine is exactly the same as though he were to be a general practitioner, and he is in all respects an equal in mental equipment.

The practical benefit of such a course of instruction seems to be borne out by the results obtained in the Dental Department of the Milwaukee Medical College, where for students undertaking this double work, eleven full months of attendance in each year are required. The men ambitious and able to undertake and carry on this course faithfully have proved themselves to be in every way more fit and capable than those whose desire is to slip along with less effort in the way of study and attendance; are better operators, more skilful in mechanical ability and far more to be depended on to deal with surgical and other measures in the treatment of pathologic conditions than they could possibly be with only three seven-months terms of special dental instruction.

Perhaps one of the most perfect systems for educational development that has ever been brought forward is the Froebel kindergarten. Its practical utility in developing the powers of the growing child, of forming character, in pointing to his special traits and in leading on to the future selection of an occupation such as Nature's bestowment of talent has best fitted him for, all through the delightful agency of plays, songs and entirely happy occupation is simply marvelous, yet its general application to public school methods for large numbers of children, where so much of the significance of each part is necessarily lost and only that which is purely mechanical remains, is undoubtedly proving itself anything but the benefit that it really ought to be; so in the matter of giving instruction in operative and prosthetic technics in our dental colleges while the conception and value of such work in preparing the student by training the hand, the eye and the mind to act together with a just appreciation of the requirements for operations on the mouth and teeth, by laboratory instruction, beyond doubt mark a mile-stone in the progress of dental education, yet when such methods are applied to the instruction of numbers of students far greater than should be undertaken at one time—where actual work on the patient was required and where instead of the individual student being brought in closer touch with actual conditions of the mouth he is kept away from them and thus longer removed from the time when he shall operate on the living subject—then like the kindergarten under similar conditions, they cease to be the thing of benefit that they should be, and become a menace to that high development for which they were originally instituted.

Unfortunately, the fact is not generally recognized professionally, socially or otherwise, that the mental and physical requirements of the practitioner of dentistry cover a wide field, even greater than the exactions for rhinology, laryngology, otology or ophthalmology. His need of medical science is quite as great; his special part in its relation to general disease or to pathologic conditions in other parts is fully as significant as theirs; and beside all this he must have the eye and the subtle appreciation of cosmic effects that the artist has, as well as the delicacy of touch and manual dexterity of those whose occupation fits them to manipulate the delicate hair-springs of the finest watches. It is because the breadth, the scope, and the wonderful possibilities of individual and collective effort, if directed toward the development of the powers of future dental practitioners as a benefit to humanity, are not fully understood.

Consider for a moment that the mouth is the beginning of the digestive tract, the functions of which are as much dependent on its co-operation as any other portion, and that its impairment through disease can at once extend an influence throughout the entire economy, disastrously affecting digestion, assimilation and metabolic changes without which a general condition of health is impossible. Remember that its lining membrane extends to the nose and throat, and any of its diseases are thus afforded easy transit to more remote parts; also that with heat, moisture, accessibility to the outer air, what a wonderful incubator it provides with culture-media ready to cater to the appetites of every variety of germ; and bear in mind that it commonly harbors the bacilli of tuberculosis, diphtheria, typhoid fever, the pneumococcus, the streptococcus of erysipelas, and the various germs that are known to be concerned in suppurative processes. Think again of the network of large vessels capable of carrying infectious products directly to the brain and the intricate network of nerves, irritation of which can easily cause pain, paralysis, anesthesia, hyperesthesia of different parts, or through their ganglionic associates, send messages to different portions of the body, which shall in their turn give rise to conditions such as neurasthenia, epilepsy, chorea, etc. Furthermore, let your mind dwell on the possibility of anemia, septicemia, pyemia, or tetanus through the agency of disturbances in this single part, and then let question who will the need of medical knowledge for those on whom all these considerations must depend.

In the U. S. Educational Report it is noticed that dentistry is a branch of minor surgery, specialized and quite apart from medicine or even general surgery. Is the practice of dentistry more of the nature of minor surgery or are the operations performed by the dentist in treatment of diseases of the mouth less grave or more fitly termed minor than the majority of those performed by practitioners of those other specialties, and is not the fitting of glasses quite as mechanical in its nature as the fitting of dentures?

In parts of Europe there has long been a distinction between the dentist of limited degree and him who, through having had sufficient education, is entitled to be called "Doctor." The Belgian government has in contemplation the suppression of the diploma in dentistry with the right to practice dentistry to be conferred only on the physician, the same as the other specialties of medicine.

While it seems altogether unlikely that America will follow the lead of European nations in regard to any matter pertaining to dentistry, the fact nevertheless remains that, having taken longer and more expensive courses in both medicine and dentistry, it is but natural that some benefits should accrue to the individual aside from his own selfconsciousness in being better equipped for the practice of his chosen profession. This can only be through closer relations with the medical profession and the recognition as a member of that profession by the public generally, hence the tendency already noticed on the part of a steadily increasing number of individuals to hold aloof from purely dental conventions and interests. This condition of things is greatly to be deplored; it is just the leaven of the influence of such men that the upraising of the dental standard requires most urgently now as ever; and above all things the work of this Section should be to bring all into the great medical fold.

The time has come, it would seem, for the dentist who would be also a surgeon to be one in fact as well as in name—to have his degree in medicine and also that which certifies to his special training as a dentist. If he chooses to ignore the medical aspect of his calling then he should, with due regard for consistency, leave out the word surgeon, and call himself doctor of dentistry, not doctor of dental surgery or doctor of dental medicine, since he elects to ignore the profession which these terms represent, and to be simply the doctor of dentistry, in other words, a teacher of the methods of filling teeth, shorn of the medical, pathologic, bacteriologic, the surgical, and in short, the entire medico-scientific aspect. The very individuals who so loudly proclaim the fact that a dentist should be distinct from the medical profession, and freely ignore the right to recognition in that direction, would be the very first to protest against the withdrawal of all those portions of the educational and practical branches of his profession, which belong by right of fact, custom, priority and inheritance to the older profession from which they wish to separate themselves.

It seems the height of absurdity to speak of the "passing of the dental college" at the moment when the number of recent graduates eclipses all former records, yet, just as the lengthening shadows betoken the coming sunset, so must follow as "night the day" a restoration to medicine unconditionally of her wayward but promising child, dentistry.

## THE PRACTICAL VALUE OF A MEDICAL EDUCATION TO THE STUDENT OF DENTISTRY.*

### BY WARREN BROWN HILL, M.D.

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Much has been said as to the necessity of a broad educational foundation for dental students from a theoretic or scientific point of view. That an educational superstructure can be raised only to a height correlative to the breadth of its scientific foundation will be gainsaid by none; but I would speak of the value of a broad medical education in the everyday practice of the student of dentistry when he has taken upon himself his life-work as a practitioner. There exists too broad a gap between the practice of medicine and dentistry; a field of practice uncultivated by either doctor or dentist; one which can not be reached by either so long as present conditions remain. The doctor fails to recognize the mouth as a cavity in which neural irritations, productive of remote manifestations are developed, but treats it rather as a cavity for dentists to work in. The infection of the alimentary tract is a matter of great interest to the practitioner of medicine, but the oral cavity, with its abundance of microbes and its deep recesses for their propagation, has been abandoned by them to the dentist.

The patient is referred to the dentist with the expectation that he will assume the full responsibility of the care of the mouth, a responsibility which he may not assume if his knowledge of medicine is not sufficient to trace from cause to effect and from effect back to cause again any of the pathologic conditions to be found there. In our present condition of practice a large percentage of the diseases of oral origin go unrecognized by dentist and doctor alike; the doctor unskilled in locating abnormal conditions of the mouth, the dentist uninterested in the remote manifestations in the body of the patient. That humanity should so unnecessarily suffer from the maladjustment of medical and dental education is a serious reflection upon the intelligence of these professions.

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*Presented in a Symposium on Dental Education, before the Section on Stomatology, at the Fifty-first A[illegible]l Meeting of the American Medical [illegible], held at A[illegible]ity, N. [illegible] June 5-8, 1900.

Medicine and dentistry should no longer be divorced. Dentistry should at once take its place as a part of the science and art of medicine and should be practiced as a specialty. The intelligent consultation of doctor and dentist would remedy the evil; but no consultation can be intelligent until those consulting have a common ground on which to stand—a medical education.

The ideal dentist should be not only a graduate in medicine but one of hospital or practical experience extending over one or two years before actively engaging in the special work of his profession. He should have become familiar with pathologic conditions, not only in the mouth but in the body generally. His clinical training should be such that he can discern the effects of reflex irritations on the system as well as the results of infections on the patient generally. In fact he should have so comprehensive a knowledge of practical medicine that he can diagnose disease with sufficient accuracy to refer his work to its proper field in medicine, and then by his consultation and co-operation contribute materially to the welfare of his patient. But ideals are not easily attained. Still, we may always aim high, and while waiting for the advent of ideal education, may encourage the coeducation of doctors and dentists by bringing together medical and dental students in one institution and requiring the same course of instruction in the fundamental branches. We may offer the dental students the advantages of attendance upon medical and surgical clinics and gradually weave into their course those studies of the medical curriculum best adapted to broaden their education, until finally we may evolve the ideal dentist, the peer of any specialist in medicine.

802 Third Street.

# IS MEDICAL EDUCATION A NECESSARY QUALIFICATION FOR DENTAL PRACTICE?*

BY R. R. ANDREWS, D.D.S.

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At the dental section meeting of the AMERICAN MEDICAL ASSOCIATION, in Baltimore, some years ago, while speaking on the subject of dental education, I strongly advocated the formation of a medical university, an institution that should educate men in medicine, and have all the chairs necessary to thoroughly teach any specialty that the student should elect; and that there should be taught those principles which should give to each of its graduates the old and honored degreee, M.D. I can conceive of no reason why this idea might not become a reality in the presence of a noble enthusiasm for real progress. An undergraduate from Harvard elects his necessary eighteen courses, with the exception of the few required, distinctly different from another man in the same class, and yet both receive the same degree, that of A.B. This is practically true in the department of science, where he receives the degree of S.B., yet he may have specialized in chemistry, in engineering, or in electricity, and it is also true in the medical department, where men specialize in the eye, the ear, in surgery and in other special studies. So far as I am aware, dentistry is the only specialty having separate schools, and giving a separate special degree. Dr. Chapen A. Harris, the father of American dentistry, who realized that the dentist should be medically educated, endeavored to establish a professorship of dental surgery in the medical department of the University of Maryland. The authorities of the university, not having a very exalted opinion of dentistry as it existed at that time, would not agree to this, and Harris, with his friends, founded the Baltimore College of Dentistry.

This was the reason for its separation; can we rectify the mistake? Does the oculist, the aurist, or the dermatologist have any better claim to be known in medicine as a specialist than the dentist? A decided advance in educational matters lies in the fact that our professional schools are demanding as an entrance condition, that men who are to become scientists, physicians, lawyers, or clergymen must have received a degree in letters from one of the recognized colleges. The high standard of our professional schools demands this. Is there any reason why we should not demand as much from the man who is to become a dentist? I do not believe that there is at present an independent dental school that could exist if the requirement for entrance were a degree in letters. Let the few then who have such qualifications acquire the medical education, and thus take a higher stand. The managers of some of our large dental schools in the past, partly in the mercenary spirit of competition, and partly from the low standard they have adopted for entrance examinations, are largely responsible for swelling the vast army of matriculants from year to year, graduating many improperly prepared men, who are not fitted for a professional life, men who have no educational, ethical, or professional standard.

This has been going on at an unprecedented rate; can we wonder at the consequence? We realize it on all sides. The number of well-advertised dental parlors, dental institutes, and dental departments of the department stores is greater than ever. These places are managed by men having a degree from one of these dental colleges, and they have under their charge young graduates or sometimes men who have not yet graduated. Many of them set at naught all tradition and sentiment, and resort to means or methods calculated to fill their purses at the expense of their patients. For this condition, dental colleges as conducted in the past are in part responsible; it is a pathologic condition of our profession, and should have a remedy—what shall that remedy be?

"Is medical education a necessary qualification for dental practice?" Most of the professions are older than dentistry, and in the main they will always be above the ordinary; the legal profession dares not stoop to pettifoggery, the clergy must keep up the standard of its sacred calling, physicians must not stoop to quackery: such an action would bring disaster and disgrace. I believe that it was the lack of ethical and professional training in the past that is largely responsible for the perverters of our profession. I am not unmindful of the great work that our dental colleges of the better class have done, or of the wonderful progress that dentistry has made under them. And this I believe is the very thing which is leading up to what we advocate—the necessity for the old and honored degree of Doctor of Medicine. This degree would give to the dentist a broader education; would improve his social and professional status; would give a large and general knowledge of the scientific principles involved; a more specialized knowledge of the interrelations of general disease and local manifestations, and a greater familiarity with bacteriology as specially associated with the mouth. Then the mental training which would result from such a course in the higher qualifications must be of vast service to him in his practice in after life. It has been held by some that we are likely to lose our manual skill attending to studies so largely theoretic, but do they not forget how much practical work is required for a degree in medicine? In physiology, chemistry, physics, and at the dissecting-table one gains a very large amount of manual skill, and also gains a very decided mental training which must result in a distinct advance when combined with the full special technical training of his chosen profession. This advance is meant in no way to be antagonistic to the standing of the degreed man of to-day.

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*Presented in a Symposium on Dental Education, before the Section on Stomatology, at the Fifty-first Annual Meeting of the AMERICAN MEDICAL ASSOCIATION, held at Atlantic City, N. J., June 5-8, 1900.

The demand of the time is for a higher standard; the salvation of our profession is to be achieved through higher educational attainment, high enough to eliminate ignorance and incompetency. In the highest sense, dentistry is a specialty in medicine, and more time should be given in our special training to dealing with the abstruse problems in medicine which have to do with remote influences on the mouth and its diseases. All those remedies affecting nutrition and assimilation have a direct interest to the dentist; the art of prescribing the proper remedies should be known, and not neglected, as it is by the majority of dentists at present. We should know the human system thoroughly, and should know enough of medicine to be prepared to treat intelligently those general pathologic conditions that affect the organs which are our special care. The surgeon not only understands the way to operate, but he knows as well the proper remedies. All must admit that the dentist should know enough of the human system to be thoroughly prepared in his special education. I believe that this can be better done in the medical school with a special dental training. We are not in a position to demand a higher standard, and the question comes to us, how can we better our profession in ethical and professional ways? the true interests of our profession. A change must come, if not this year then the next, or the next. The best and truest friends in our profession should lend a hand to bring about this result. It is a result which must add greatly to our status as professional men. The question confronts us whether ours shall be a profession or a business? What is our remedy? Our leaders are thinking; as a result, our dental schools are fast becoming allied to universities having medical departments. The trend of dental education is certainly toward the medical, and the tone from the graduates of these schools is more ethical; here it seems to me lies our opportunity. We must give an ethical, professional, and technical education to the average graduate. We can not advance a profession faster than its average graduate. Let us urge the educators of universities to blend the dental with the medical, adding such chairs in the special dental courses as shall give a complete technical training. I, myself, have no doubt that this is coming, and present indications confirm my belief.

Harvard University is preparing to erect a medical university and will take in under one care all of its medical specialties, including the dental. With the proper application of influence, we may look for the same degree which is now given to the oculist, the aurist, the surgeon and the dermatologist. Can this be brought partum hemorrhage. Fortunately, it is largely a preventable accident, and if proper care be exercised in the management of the third stage of labor it will seldom occur. When seen it will be best controlled if we have the knowledge of the usual causes of its production.

Uterine inertia is responsible for most cases, and this is occasioned by the exhaustion consequent upon long and repeated muscular efforts at delivery; by the weakening of the uterine muscle-fiber, due to overdistension from excessive liquor amnii, or twin pregnancies; or by frequent child-bearing, or sometimes by an overloaded bladder.

Irregular uterine contractions, or what is commonly called hour-glass contraction, produced often by unnecessary traction upon the cord and placenta, is a frequent cause of postpartum hemorrhage.

Placental adhesions, usually only slight, are often accompanied by profuse bleeding, by interfering with the proper uterine contractions and expulsion of the placenta and its membranes. If we add to these conditions that constitutional tendency to bleeding seen in the so-called hemophilic, we shall have noted the usual causes of early postpartum hemorrhage.

Occasionally careless rolling in bed before the binder is applied, and too early assumption of the sitting posture, for the functions of micturition and defecation, cause sudden and alarming hemorrhage. These are practices to be strongly deprecated, notwithstanding the fact that many accoucheurs sanction and advise such liberty. I saw almost a fatal hemorrhage, in a woman who showed no evidence for anxiety, brought on, I am satisfied, by permitting her to roll over to the other side of the bed to enable the nurse more easily to arrange the bed-linen. And here let me refer to a frequent cause of concealed hemorrhage: The binder is often applied before the uterus remains in firm contraction; then when least expected the organ relaxes and very alarming symptoms soon follow.

The treatment of this class of cases, where the hemorrhage has occurred early, is to adopt such means as will rapidly and effectively produce strong uterine contractions. The uterus should be held firmly in the grasp of the hand, and the placenta, if not expelled, should be expressed at once by the Credé method. The uterine contractions should be stimulated by manual pressure, and if it contains clots or a piece of membrane or placenta, these should be pushed out either by pressure from without or by careful introduction of the hand into the uterus. Ergot should be given either alone or in combination with belladonna or atropia, or ergotin should be given hypodermically. Stimulants should be administered either by the mouth or hypodermically; strychnia, digitalis, and such remedies as are ordinarily employed to relieve shock should be given; warmth must be applied to the body, etc.

Sometimes a hypodermic injection of sulphuric ether in teaspoonful doses acts well. The limbs should be bandaged from the feet up and the foot of the bed elevated. Large saline injections should be introduced into the bowel or under the skin or into the submammary tissues. A pint or more can be injected under the breast; in fact the breasts can be distended until the fluid exudes through the nipples. The uterus should be further excited to contraction as much as possible; sometimes the intrauterine injection of very hot water is a powerful excitant, as is also the copious application of ordinary hot vinegar; or a piece of ice may be introduced into the vagina up against the os uteri, or even into the uterus. The abdominal aorta should be firmly compressed if the bleeding is alarming. If these means fail, the uterus should be packed with large, broad strips of iodoform gauze—about 5 per cent. iodoform—and the vagina tamponed with the same material. Attention should be given the bladder, whch should always be empty, as a moderately distended organ will encourage, if not actually produce, postpartum hemorrhage in subjects predisposed to bleeding.

It must be understood, however, that packing of the uterus with iodoform gauze must be done carefully and with due regard to every antiseptic and aseptic precaution. It is a well-recognized form of treatment and is a valuable addition to our armamentarium, but is only to be used when the uterus fails to substantially respond to the other more quickly applied measures.

Hemorrhage after delivery is very often due to laceration of the soft parts, and particularly the cervix. In these cases, the tear usually extends to the fornix, and involves the circular artery. It can be controlled at once if the patient be placed upon the table and the parts exposed with the assistance of a good light. A speculum is not necessary, because the uterus can be seized with a tenaculum or vulsella forceps, pulled down through the introitus and the tear sewed up. Catgut is to be preferred. Usually excellent union takes place. In two cases I have had gratifying results in the immediate repair of cervical lacerations.

Tears in the vagina often cause great loss of blood. These are often overlooked or not suspected because the skin perineum seems to be intact. This experience I have often had, and with the assistance of a nurse who gently separated the lips of the vulva, a tear high up in the posterior wall has been brought together by a few stitches and the bleeding stopped at once.

Tears often take place anteriorly along the side of the urethra and through the labia to the pubes. I am satisfied that these anterior tears are much more frequent since we have been paying so much attention to the perineum and, in our desire to save it by lateral incisions or carefully directed efforts, the force of the approaching head is made to expend itself forward until these soft structures give way. They should be repaired immediately, and in fact, if all tears of the soft parts were at once brought together, much future suffering would be spared our child-bearing women.

I have heard men in medical societies, in discussion, say that they never have torn perinei, and very seldom see occasion for suturing the soft parts. These men are the most dangerous practitioners we have, because they are either too ignorant or too careless to detect lacerations, or too cowardly to assume the responsibility of them and the necessary pain occasioned by bringing them together. Such excuses as the tear does not amount to anything will not be accepted by qualified men to-day, as good practice, when an ordinary cambric needle, threaded with common linen thread is all that is necessary for their repair.

Sometimes very decided bleeding takes place from a ruptured varicose vein, or from incipient malignant disease of the cervix; the former is usually controlled by pressure with a piece of gauze, while the latter must be met by general surgical principles.

Hemorrhages which occur some days after labor are often due to retained pieces of placenta or secundines. A little oozing takes place and the blood collects around these retained products until the uterus relaxes, when a sudden and often alarming rush of blood takes place. Then the bleeding often ceases for some hours or even days, and again manifests itself by a sudden and perhaps overwhelming discharge of bright-red blood. I have had in my own practice three such cases, and have seen quite a number in consultation with other men; I have found the patients often moribund, cold and pulseless, even so late as in the third or fourth week.

Submucous and intramural fibroid tumors often cause alarming hemorrhages and are not easily diagnosed unless the patient be placed on a table, the uterus pushed well down into the vagina, the finger carried through the cervix, and the body of the uterus thoroughly explored by bimanual palpation. Unfortunately, we keep temporizing in these cases of hemorrhage, and do not take the trouble to examine our patients carefully enough, or the cause would be more often detected. It is a mistake to try to make a careful examination in bed, because it is impossible; and it is the grossest carelessness to let these cases go on bleeding from day to day without finding the source.

Another frequent cause of prolonged loss of blood, and particularly that bleeding which comes after the tenth day into the second and third week, is a retroverted uterus. In fact, I am beginning to believe that this is more often responsible for profuse, bloody lochial discharges and late losses of blood than anything else. This condition is quickly relieved by the insertion of a proper-fitting pessary after the uterus has been been first lifted into position.

Sometimes an old endometritis, or a recent septic endometritis, or still more frequently a gonorrheal endometritis is associated with much loss of blood, and is responsible for the subsequent subinvolution and tubal and ovarian diseases, which occur so frequently in puerperal cases.

A very interesting and somewhat rare form of hemorrhage, although not so serious in so far as the mere loss of blood is concerned, but of great importance from a surgical standpoint, is hematoma of the labia. This form of bleeding is concealed and only makes its presence known, perhaps a few hours after delivery, by great pain running down the course of the sciatic nerve into the calf or the heel. Then a swelling begins to manifest itself in one or the other labium, gradually increasing in size until it distends the tissues enormously, filling up the soft parts between the vagina and the hip joint. It soon becomes black and very hard. The pain at the same time is excruciating. I have seen two such cases; one which was operated on by Dr. Frederick in the Woman's Hospital; the other occurred in my own practice and was operated on by myself. Both cases did well under surgical interference and made a rapid and perfect recovery. There seems to be some doubt as to the proper course to pursue in this condition, but I am satisfied that the accident is not nearly so serious as our older authors seemed to think it was. With our improved surgical technique, the patients ought all to receive operative attention, and to my mind, all should get well. A history of my case and the course which was pursued will, perhaps, be interesting; the latter, I am sure, will meet the approval of the surgeon of to-day.

The woman—Mrs. D., aged 35, a primipara—was delivered of a female child weighing 7½ pounds, breech presentation. The labor was tolerably easy and quite rapid. After the placenta was expressed and the bandage applied, she began to complain of great pain down the left leg. Soon this became excruciating in the calf and heel. Nothing could be seen to account for this condition, so an injection of morphia hypodermically was given. This soon had to be repeated, and instructions were left with the nurse to meet the pain, when severe, by the morphia. In the morning, quite a marked swelling appeared in the soft parts between the external labium and the inner side of the thigh, and extended high up in the vagina to the cervix, filling up the whole left pelvis. A diagnosis was now easily made, and ice was applied externally for forty-eight hours over the hard, dark, swollen mass. The patient was then anesthetized, and the parts prepared for operation; a good incision was made through the most dependent part on the outside, and at least a quart of black clots removed. The cavity was then gently irrigated and packed with iodoform gauze. There was no subsequent temperature. The wound was dressed on the third day, when a lot of old clots which had separated were washed away, and the wound was again packed with gauze. In three weeks the cavity had disappeared and the patient was permitted to sit up. The danger in connection with the early operation is the continuation of the bleeding, but after forty-eight hours the ruptured vessel has had time to close, and if the clots are removed carefully and not followed by too much irrigation, there is but very slight danger of the hemorrhage recurring. If it does, however, the vessel must be found if possible, but failing in this, the cavity is to be firmly packed with gauze.

Lastly I shall but call your attention to the hemorrhage due to subinvolution of the uterus, owing to an old unrepaired cervical laceration. In this case the hemorrhage will be kept up until a properly performed trachelorrhaphy is instituted. It comes on late, but the continued loss of blood shows itself in the profoundest anemia and physical weakness, either by hemorrhages during the periods—metrorrhagia—or excessive loss at the periods—menorrhagia. Tonics, good food, careful hygiene, open-air life but not too much exercise, avoidance of physical exertion and unnecessary assumption of the erect posture, are the indications. Tampons may be used; the bowels should be open every day; and combinations of ergot and mineral acids, and ergot and iron administered *pro re nata.*

Electricity is a most valuable remedy to bring about tonic contractions of the uterus and, in the form of faradization, is a very effective uterine stimulant. The coarse coil should be employed and the vibrator should make slow interruptions.

I am satisfied it is good practice to have every woman who has been confined get into the knee-elbow position after the eighth day, twice a day for three minutes, and also to occasionally turn herself over on her abdomen, so as to favor a natural anteflexion position. The knee-elbow posture encourages anteflexion, promotes rapid involution and prevents subsequent retrodisplacements. The time at which a woman may be permitted to assume the erect position and put on her clothing is not to be arbitrarily estimated i[illegible] ys [illegible] woman may with perfect safety get up [illegible] while an[illegible] [illegible]uld be kept recumb[illegible] [illegible] or lo[illegible] uterus is well contracted and remains so and there is no loss of blood, one patient may even get up on the eighth day without doing herself any special harm, while another with relaxed uterus and tendency to flowing and with slight prolapsus might sow the seeds for much suffering and future chronic invalidism. It is in the line of preventive medicine that the future well-being of womankind is to have its protection, and the perpetuity of our race depends upon our careful and anxious solicitude.

*493 Delaware Avenue.*

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# IRITIS SENUM.*

BY ALBERT B. HALE, M.D.

CHICAGO.

Although the study of the iris, in its normal and pathologic conditions is a well-developed field, I have lately had some experiences by which a few new phases in the action of that tissue have been brought out, and the lessons learned therefrom have been so valuable that they deserve special notice, particularly as there seems to be a lack of direct mention of them in text-books which may be considered exhaustive. The outline of a case may well illustrate the point I wish to emphasize.

One day last winter I was called to see an old lady of 86, who had caught cold in the eyes the day before. Examination revealed catarrhal conjunctivitis and the patient said that the lids were stuck together in the morning. The left eye seemed to be slightly more involved than the right. There was some annoying pain, but vision was not noticeably affected, nor was tension raised. The iris in each eye acted normally, was not discolored, nor was the pupil in the least contracted beyond what may be expected in old people. The treatment for a simple catarrh of the conjunctiva was at first successful; the right eye soon recovered its usual clearness and activity, but the left eye, while much improved, was not yet well. There was some pain, especially at night. Pressure over the ciliary region caused pain; the conjunctiva was pinkish but the iris was not immobile nor discolored. As I feared I might have overlooked some threatenings of glaucoma, I employed a weak solution of eserin, but although it did not aggravate the symptoms, it produced no benefit.

I now determined to ascertain the intraocular condition even at the risk of provoking glaucoma. I therefore began the use of atropin, 1 per cent. solution, but watched it closely. During the first twenty-four hours the pain slowly diminished, the conjunctiva grew less red, and the tension was not raised. The pupil, however, though it still remained symmetrical, was smaller than normal, and I thought I could detect some irregularities at the region of the sphincter muscle. As I was not satisfied, I used a granule of pure atropin sulphate, guarded by cocain, followed by a 2 per cent. solution at short intervals. The effect was magical. Within twenty-four hours the pupil was dilated *ad maximum* except at one or two places where adhesions still bound it to the capsule; but these adhesions had not been found at the periphery, and a row of pigment deposits showed that corresponding adhesions had existed about two millimeters back of the pupilary edge. Continued use of the stronger solution of atropin broke up all the adhesions, the iritis soon disappeared, the eye soon became normal and further treatment was discontinued.

This case was soon after followed by another which was very similar. A lady of 84, who had been treated by domestic remedies for what she thought was conjunctivitis, asked me to give her something to relieve the pain from which she suffered at night. Remembering my former experience, I ventured to make the diagnosis of iritis, although in this case, also, there were no signs which would indicate an involvement of the iris. Again, however, my suspicions were confirmed by finding slight adhesions, by immediate relief of all symptoms and a speedy restoration to the normal condition. Since then I have seen other cases, and always in quite old women, in which the same course was pursued, hence am always suspicious of conjunctivitis in very old people which does not yield speedily to ordinary treatment.

I shall, therefore, formulate the following method in approaching even a conjunctivitis in very old people: Of course the mucous membrane must be treated by itself; as a rule a simple borated wash with a zinc or some other astringent solution, combined with a mild ointment at night, will accomplish all that is desired, but under no circumstances should the iris be forgotten. I think it would be well from time to time, even from the beginning, to use some mild but positive mydriatic, such as euphthalmin or homatropin, and to study its effect upon the pupil. The pupil in old age is usually small and the iris sluggish, but the effect of the mydriatic should be to produce a decidedly dilated pupil, or else it should show some adhesions. If the effect is produced at once, it will be just to assume that the iris has not become involved, but if there is the least irregularity, I should not hesitate to use atropin immediately. I know, of course, the traditional fear of provoking glaucoma in the old, but I can not think that this rare accident should outweigh the advantage of keeping the iris well under control. One positive effect of the mydriatic, if the tension were effected by it, would be a decided increase in the pain, but this can be checked and perhaps overcome by eserin; whereas the neglect of the mydriatic and the persistence of the iritic exudate would perpetuate a condition very hard to overcome.

To the suspicion of iritis may be added some signs which show that the conjunctivitis is not running its regular course. Chief among these is the fact that one eye is almost always more affected than the other; the redness persists longer, the pain seems located in that eye, and although the patient says she feels better, there are still objective evidences that everything is not right. A second sign is the gradual disappearance of the mucopurulent discharge and its displacement by profuse lacrimation in the affected eye. I have not noticed that photophobia is so pronounced in old people as to be considered trustworthy evidence.

The explanation of the condition is rather simple. Undoubtedly the trouble begins as a catarrhal conjunctivitis after a mild cold, but the mucous membrane in the very old is not so resistive as it is in younger people, and the infection therefore strikes deeper and lasts longer. This constant irritation finally has an influence in the eye-ball itself, and the iris, although not actually infected by any micro-organism, is sufficiently irritated to throw out a little plastic exudate, which binds it to the lens. If this adhesion is not overcome, the iritis becomes fully developed. If it is at once checked, the irritation rarely goes beyond that stage and the eye is soon restored to its normal condition.

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*Read before the Chicago Medical Society, May 9, 1900.

# Societies.

### COMING MEETING.

Michigan State Medical Society.—Mackinac Island, July 11-12, 1900.

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California North District Medical Society.—This society held its semi-annual meeting in Woodlawn, June 12. Three new members were added and Sacramento was selected as the next place of meeting.

Crow River Valley Medical Association.—This Association met in Hutchinson, Minn., June 13. All the former officers were re-elected, as follows: president, Frank E. Bissel; vice-president, Kee Wakefield; secretary, James Robertson; treasurer, Frank Archibald.

South Dakota Medical Society.—At the annual meeting of this Society, held in Aberdeen, June 14, the following officers were elected: president, C. M. Keeling, Springfield; first vice-president, C. B. Alford, Huron; second vice-president, L. M. Diefendorf, Aberdeen; secretary and treasurer, D. W. Rudgers, Yankton.

Indian Territory Medical Association.—This Association held its semi-annual meeting at Wagoner, June 19 and 20. The following officers were elected: president, Le Roy Long, Caddo; vice-president, D. Gardner, Lehigh; second vice-president, J. N. Fain, Wagoner; secretary and treasurer, Fred S. Clinton, Tulsa. The next meeting will be held in Muscogee, in December.

Maine Medical Association.—This Association met in Portland, June 13-15. The annual oration was delivered by Dr. J. C. Warren. of Boston. The officers elected were: president, E. H. Hill, Lewiston; first vice-president, H. B. Palmer, Farmington; second vice-president, J. F. Manning, Ellsworth; corresponding secretary, C. A. Peaslee, Wiscasset. The next meeting will be held in Portland, the first Wednesday, Thursday and Friday of June, 1901.

Delaware State Medical Society.—At the annual meeting of this Society, held in Rehoboth, June 14, the following officers were elected: president, Williard Springer, Wilmington; first-vice-president, E. S. Dwight, Smyrna; second vice-president, W. T. Haines, Seaford; secretary, John Palmer, Jr., Wilmington; assistant secretary, Joseph M. Martin, Lewes; treasurer, W. C. Pierce, Wilmington. The next meeting will be held in Lewes, June 11, 1901.

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## Maryland Public Health Association.

*Third Annual Meeting, Baltimore, May 29 and 30, 1900.*

### MILK.

Dr. Wm. D. Booker condemned all artificial foods for infants as unnecessary and dangerous. He said that no physician, abreast with modern thought, employs them, for there is no substitute for mother's milk that is more convenient and practical than the milk of the cow. In some respects, we are able to assimilate the latter to the former. The chemical differences are not of vital importance, the difference in purity alone is essential; breast milk, since it passes directly from the breast to the child's mouth, is nearly pure, while cow's milk passes through several hands and the purest samples contain from 4000 to 6000 germs to the dram. The dairy-farmer should acquaint himself with the subject, so that the first supply may be pure, and then sterilization should be assisted in order to destroy the germs. The purpose of this is not to improve its digestibility or nutritious qualities, but only to promote its purity. There is not much danger in cold weather; therefore, sterilization is not so essential then. The care of the bottle during nursing is most important. As soon as the child has finished nursing, any milk that may be left should be thrown away, the bottle washed with soda water until transparent and then inverted till needed again, as the germs grow less readily on a dry than on a moist surface. The bottle should be sterilized each time before using. Neither steaming nor Pasteurizing the milk injures it materially, but the latter is to be preferred. Neither destroys the spore-bearing germs, but these do not grow if the sterilized milk is kept on ice.

Dr. William Royal Stokes, city bacteriologist, called attention to the fact that milk is a favorable medium for the artificial growth of pathogenic bacteria. A cubic centimeter of milk has been found by government experts in Washington to contain from 6000 to 100,000,000 germs. The milk from cows milked in the open-air contains fewer bacteria than that from those milked in dusty stables. The evidence shows that infants can take tuberculosis from the milk of tuberculous cows, but that such milk is not so virulent as that from human tuberculous subjects. In Washington, D. C., more germs were found in some specimens of milk than in sewage water; and 3 per cent. of five thousand cows which were examined around Baltimore were found tuberculous.

Miss E. M. White, of the bacteriologic department, explained the methods used in counting bacteria in milk, which has been carried on since April 1. Fifteen drops of milk are poured in on melted gelatin in a specially constructed, closed glass dish, previously sterilized. The presence of bacteria is indicated by white spots on the glass, each spot being a colony of bacteria, representing one germ. Examination for pus is made by spreading the milk over glass slides, allowing it to dry and then staining with anilin. Tubercle bacilli are sought in a similar way. Of the samples from eleven dairies thus examined the bacteria in fifteen drops of milk varied from 5100 to 382,200; all but three of the specimens contained pus cells, but none tubercle bacilli. Mechanical processes—classification and filtration—free milk from pus and other impurities, but make little difference in the bacteria. The best results are obtained from processes involving cleanliness and refrigeration.

Dr. G. Lehman, chemist of the same department, spoke of chemicals and preservatives introduced by dealers under various names, formaldehyde being almost exclusively used. It is still a question whether in minute quantity—but still sufficient to preserve the milk—this substance is in any degree injurious.

### BUBONIC PLAGUE.

Dr. Lewellys F. Barker delivered an illustrated lecture on this subject, giving the result of his observations during a recent visit to the plague-stricken regions of India.

### OBSTACLES TO PUBLIC HEALTH LEGISLATION.

Dr. Clotworthy Birnie, of Carroll County, read a paper on this subject and maintained that public opinion must uphold laws in order to secure their enforcement, and what is most needed in Maryland is to educate the people to a knowledge of health laws and a realization of their value and necessity. Adequate appropriations by legislators and county commismisioners can be secured only by training them in the knowledge of hygiene.

### SOME OF THE COMMUNICABLE DISEASES OF THE SKIN.

Dr. T. C. Gilchrist concluded an article on this subject as follows: Children with bald patches, dandruff or scaly-like areas in the scalp should be excluded from school until it is shown by a physician's certificate that ringworm is not present. Also, any child who has any pustular or scaly condition of the scalp should be kept away from school until the condition is cured. Lastly, any foreign-born children, especially Italians, Russians and Hungarians, should be examined for diseases of the scalp; and if any is found the child should be excluded from school until it is proved that the disease is not contagious. Much more vigorous measures are enforced in the public schools of Boston and New York, than in those of Baltimore, and as a result, the condition of the children is much better in those cities.

### THE RELATION BETWEEN HYGIENE AND PHYSIOLOGY.

Dr. S. J. Fort, of Howard County, criticised severely the inefficient instruction in these subjects given in the public schools.

### PREVENTIVE INOCULATION AGAINST TYPHOID FEVER.

Dr. John S. Fulton, secretary of the State Board of Health, described in detail the method of preparing and administering the antitoxin and its effects as at present known.

### MALARIA AND ITS PREVENTION.

Dr. W. S. Mayer, said that the origin of malaria has now been narrowed down to the mosquito and a particular variety only—the anopheles, which is known by certain peculiarities, viz.: by the possession of three proboscides, by the spots on the wings, and by the attitude on the wall; for instance, it inclines at an angle to the wall, not parallel to it, as the ordinary culex, and it keeps the two hind legs in front instead of buckling them up over the back of the other one. When on the ceiling, it seems to hang down perpendicularly. There is not a case in the literature where malaria has been proved to have been produced by drinking water or through the intestinal canal; nor is there proof that bad air has any causative agency. The only positive proof regarding the etiology is that derived from the mosquito, and this theory meets all the requirements of the case. The anopheles is always found in malarious regions. Observations tend to prove that the insect acquires the parasite only from man, and that the importation of the germ in the human blood is a necessity to the development of the disease in any locality. Observations in Italy show that there is no relation between the rainfall and the prevalence of malaria. The conjugation and sporulation of the insect were described. The cases that occur in the spring are relapses, those in the summer and fall, new infections. Statistics show that 66 per cent. of the fall cases have such a history. To combat malaria, it is necessary to treat the cases promptly and efficiently. Physicians should impress the importance of this upon the community. Quinin should never be given in pills, which are frequently entirely insoluble. Euquinin is recommended as an efficient form, and one without taste. It should be given in the flaky form, not in powder, in a dose of about one and one-half times that of ordinary quinin. Patients should be made to sleep under nets, not only on their own account but for the protection of others. The larvæ (wigglers) swim on the top of small pools and require air; and they are readily destroyed by a little coal oil poured on the water.

### ELECTION OF OFFICERS.

The following officers were elected for the ensuing year: president, Howard Brattan, Elkton; vice-presidents, Thomas B. Owings, Ellicott City; A. A. Clement, Baltimore; C. Birnie, Taneytown; Lilian Walsh, Baltimore; Mrs. John T. Graham, Mt. Washington; stewards, John S. Fulton and Samuel J. Fort; treasurer, L. Gibbons Smart.

The committee on the Rohé memorial, which is to be a tablet erected in the medical hall and a section in the library, of books on hygiene, if the fund warrants it, reported collections to the amount of $117.

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## Philadelphia Pathological Society.

*June 14, 1900.*

President, Dr. F. A. Packard, in the chair.

### RAPID DIAGNOSIS OF RABIES.

Drs. M. Ravenel and D. J. McCarthy made a preliminary note on this subject and stated that the previous method of determining the existence of rabies in an animal was to introduce under the dura a part of the brain tissue of another animal suffering with the disease. Babes, however, simplified matters, when he noted the existence of chromatolysis with degeneration of certain nerve-cells. It has been proved that this appearance is not always characteristic of rabies. Following the lines laid down by others, Drs. Ravenel and McCarthy have conducted experiments upon rabbits in which rabies has been artificially produced, and it is believed that the characteristic changes noted in this disease are due to a degeneration of nerve-cells—often with two nucleoli—and proliferation of the endothelial cells of the capsules of the intervertebral ganglia. These cells are often arranged about the inner surface of the capsules in irregular whorls. The capsule also shows infiltration with leucocytes. In some respects the appearance resembles that of round-celled sarcoma. The specimens are best stained with hematoxylin and eosin, or with eosin and methylene blue. If Nissl stain is employed it is essential that the organs be less than twenty-four hours old. By this method the diagnosis may be made within twelve hours. Dr. Ravenel further stated that one of the rabbits developed the furious form of the disease and would attempt to bite all objects near it.

### CUTANEOUS TUBERCULOSIS.

He also reported three cases of cutaneous tuberculosis due to inoculation with bovine tubercle bacillus. In his opinion the idea that the bovine tubercle bacillus is not pathogenic to man is not based on a clear understanding of the facts. Such an idea was to be deprecated. Three cases were reported in which injuries had been received—two while performing autopsies—upon the hand with infection by the bovine tubercle bacillus, followed by the development of small nodules which upon examination were found to contain round, epithelioid and giant cells. In one of these cases the bacillus had been first obtained from the infected animal, which had been accidentally inoculated into man, was then passed from man through a guinea-pig and again recovered.

Dr. M. B. Hartzell thought it was not always possible to make a diagnosis of tuberculosis of the skin simply by the histologic appearances, since certain cutaneous diseases might also present similar changes.

### DIAPHRAGMATIC HERNIA.

Dr. A. O. J. Kelly presented a specimen obtained from a man 29 years of age who had given a history of obstinate constipation and had shown evidences of acute intestinal obstruction. An operation had been performed and a large collection of pus found in the right iliac region, which had been evacuated. Death occurred. At the autopsy it was found that there was a hernia of the omentum through an opening in the diaphragm. The edges of the opening were tightly adherent and it was evidently of long standing, probably congenital.

### TUMOR OF THE BREAST.

Dr. Kelly also presented two specimens taken from the patient. No accurate examination had been made, but they were probably carcinomas.

Dr. Ernest Laplace thought it would be a point of much interest to learn which of the tumors antedated the other.

Dr. David Riesman spoke of a tumor of the breast which within a very short time increased so rapidly that it now weighs probably thirty pounds. Bloody serum had been obtained by aspiration.

### CYSTIC KIDNEY.

Dr. J. Hendrie Lloyd presented a specimen obtained from a patient who had uremic aphasia. The patient had been subject to attacks of asthma for years. Later he had suffered from complete motor aphasia, word-blindness, and hemiplegia. The only center which seemed to remain unaffected was that for hearing words. At the autopsy no alteration of the brain structure could be found, and it was believed that the symptoms were entirely functional and arose from the effects of the kidney disease. Lately he had become more guarded in diagnosis of cerebral hemorrhage in the presence of Bright's disease.

Dr. F. A. Packard had seen a case in which hemiplegia had been present in a case of nephritis. The person had completely recovered.

### ENDOCARDITIS AND CEREBRAL EMBOLISM.

Drs. J. H. Lloyd and A. M. Seabrook, present by invitation, reported a case in which antistreptococcic serum had been used without relief.

Dr. F. H. Williams exhibited a specimen of aneurysm of the aorta.

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**Food Contaminated with Lead.**—In the experiments made by Charles P. Worcester, regarding the metal stoppers used in bottles for preserves, aerated waters, etc., he found that an alloy of lead was present; in some instances, containas much as 0.2 to 93.5 per cent. of that metal. Lead was found in all samples of fruit beverages and syrups examined; the largest amount found in a sample was 1.05 mg. and the minimum .05 mg. The stoppers of these bottles were tested for lead and it was found to exist in as high a proportion as 3.5 to 50.7 per cent. He condemns the use of lead as an ingredient in the manufacture of such stoppers.

THE JOURNAL OF THE
AMERICAN MEDICAL ASSOCIATION.
61 MARKET STREET, - CHICAGO.

SATURDAY, JUNE 30, 1900.

Owing to the large amount of space demanded by the index, it has been found necessary to omit some of the departments from this issue, and to curtail those which appear.

## THE INDEX. A REQUEST.

There is printed in this number of The Journal the most complete index that was ever attempted by any medical journal, covering as it does the medical literature of the United States and Canada for the past six months. Attention is called to the fact that it is entirely different from those accompanying other medical periodicals in that the index in The Journal covers all the original articles printed in practically all the medical journals of this country and Canada, in addition to the ordinary list. In other words, it is an index medicus of American medical literature, and includes the subject of nearly, or quite, every important paper published. In the Authors' Index will be found the name of nearly every man who has published an original article during the time covered, and in what journal the article appears.

To those who have attempted to compile such an index, it will be unnecessary to say that its accomplishment has required an enormous amount of work. The question has arisen whether such an index is appreciated, or whether the labor in compiling it is in any sense a useless task. Hence, one reason for calling attention to the matter here is to discover, if possible, how many readers of The Journal really find the index valuable and desire it kept up. It is not supposed that all or even half do thus value it, because it is only of full utility to those who are in reach of the fairly good medical libraries. We shall be satisfied if even one in twenty tells us that the index is appreciated, and in that event we shall try each half year to improve it and make it more perfect than the preceding one.

Will those of our readers who desire the complete index of current medical literature continued as a feature of each volume kindly notify The Journal of the fact by postal card or otherwise? It will be taken for granted that those who appreciate it and desire it continued will take the trouble to write a postal card and say so.

## FREQUENCY AND CURABILITY OF TUBERCULOSIS.

It is self-evident that the most reliable information about the frequency and the curability of tuberculosis must come from the post-mortem room. The clinic is not the proper tribunal for the definite determination of these questions, because it is not possible clnically to detect all tuberculous foci or to determine their condition as regards progress or cure. It is furthermore obvious that statistics on these points, to be reliable, must be founded on suitable material carefully studied, with these problems constantly in mind. And the material may not come from hospitals with a disproportionately large number of tuberculous patients, but from those whose population is a fair representation of the community in general.

Perhaps the most painstaking and the most reliable study into the frequency and the curability of pulmonary tuberculosis is by Jens Bugge,[1] of Christiania. His work is devoted to the lungs and the peribronchial glands, and covers the minute and conscientious examination, including animal inoculation of these structures, from 200 persons over 14 days old, and belonging to less favorably situated classes of the population. His results are briefly these: Under the age of 1 year tuberculosis was not present when death was due to other causes than tuberculosis. Of the remaining 179, tuberculosis was the cause of death of 41. This percentage—22.9—corresponds quite accurately with the death-rate of tuberculosis in the city of Christiania, and we have here a good indication that the material used is a fairly representative one. There are, therefore, 138 individuals over 1 year of age who died from other causes than tuberculosis in the lungs or the peribronchial glands; of these 35 per cent. presented changes that are to be regarded as healed tuberculosis; and 33 per cent.—only one-fourth of the whole—who were free from tuberculosis of these structures.

Bugge's work is of especial value because he made an earnest effort at determining what justly may be called healed tuberculosis. He shows that when bacilli are demonstrable in the tissues, inoculation with such tissue produced tuberculosis in guinea-pigs except in one case. All tissues containing giant cells or tubercles also gave rise to tuberculosis on inoculation. Encapsulated caseous or puttylike masses in and about which bacilli, tubercles, or giant cells were not found proved at times virulent, at times non-virulent, a positive statement as to their virulency being out of the question before inoculation. Chalky masses, without caseous material, enclosed in dense tissue, were never found virulent; nor were pure fibrous indurations without tubercles, caseous material, or chalk. A tuberculous process in the lungs or peribronchial glands—probably also elsewhere—may be regarded as definitely healed only when there has resulted a more or less structureless connective tissue with or without calcareous deposits, but without cheesy or putty-like material.

It seems to us that it is of signal value to know positively that in about one-third of those dying from other causes than tuberculosis an actual cure of the tuberculous process has occurred in the real sense of the word.

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[1] Undersögelser om Lungetuberkulosens Hyppighed og Helbredelighed, Christiania. 1896.

Thus curability of tuberculosis is clearly established.

More recently, Otto Nägeli[2] presented a study of the same problems in tuberculosis, based on the results of 500 post-mortems in the Zurich Pathologic Institute. Nägeli takes in tuberculosis in all parts of the body. The thoroughness and skill with which the work seems to have been done naturally resulted in unearthing numerous foci that would have escaped notice in autopsies of ordinary completeness. Hence Nägeli's figures as to the frequency of non-fatal tuberculosis greatly exceed previous ones, being no less than 97 per cent. for those over 18 years of age.

The number of cases under 18 years was 88; of these, 15 were tuberculous, and 10 died from the disease. According to Nägeli's figures, latent or healed tuberculosis is rare in children as compared with adults. At puberty the disease seems a little less frequent than just before or just after. In 16 autopsies on children under 1 year tuberculosis was not found. In a series of 284 post-mortems on persons over 18, 63 died from tuberculosis—22 per cent.—nearly all the others showed latent tuberculosis, as but 6 were found wholly free from tuberculous invasion. In the fatal cases, pulmonary tuberculosis predominated—36 cases of 47, 16 cases of miliary tuberculosis being excluded.

In Nägeli's material, latent tuberculosis seems wellnigh universal in persons over 18 dying from other causes. This frequency does not depend on any special peculiarities of the material. It is probably to be found when searched for in other similar situations.

Nägeli divides the 217 cases of non-fatal tuberculosis into 74 cases of active disease, 111 healed cases, and 32 which he regards as uncertain. This division is somewhat arbitrary. He did not resort to animal inoculations, as did Bugge, but Nägeli's criteria of healed tuberculosis bear scrutiny well in the light of Bugge's demonstrations, inasmuch as he included here the cases of pleuritic apical adhesions, pleural scars with areas of slaty induration in the underlying lung, and calcareous foci. The active but latent tuberculosis was most frequent in early life, declining steadily with the advancing years. The inactive form, on the other hand, showed a steady increase with increase in age, so that after 40 practically all persons were tuberculous. At the same time the ratio of fatal tuberculosis, greatest between 18 and 30, steadily falls. These figures also contain much of comfort, because they show how well we are able to resist the disease.

In general, Nägeli shows that the disposition to tuberculosis of all kinds—as expressed by the relative frequency of fatal cases—is greatest in youth, diminishing somewhat with puberty; then it increases toward the end of the third decennium, after which it falls gradually. Relative immunity, at first slight, after the eighteenth year increases in proportion to the age. The constant increase of latent—active and inactive—tuberculosis with age would indicate a constantly growing opportunity for infection. And as the large majority of all cases of tuberculosis, manifest and latent, are either primary in the apices of the lungs, or in the glands at the hilus of the lungs, it may be concluded that the majority of the human tuberculous affections are of aerogenous origin. And Nägeli's work brings again into the foreground the much greater importance in tuberculosis of that little-known factor that we call disposition, as compared with the changes or possibility of infection. After 18 or 20, infection is almost universal, but, as stated before, the increasing chance for infection is accompanied by a decreasing disposition to lethal tuberculosis. Practically this would mean that before 30 the main effort should be to diminish the disposition to tuberculosis. Everything must be done to lessen the chance for infection, but let us not neglect the other side of the problem.

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[2] Virchow's Archiv, 1900, clx, 426.

## ACUTE HEMORRHAGIC TRANSVERSE MYELITIS AS A COMPLICATION OF TYPHOID FEVER.

The nervous complications of typhoid fever constitute a noteworthy characteristic of that disease. Headache, delirium, coma, hyperesthesia and hyperalgesia are not uncommon manifestations at the height of the fever, while motor paralysis and paresis, irritative motor phenomena, anesthesia, hyperesthesia, neuralgia and vasomotor and trophic disorders are not rarely complications. Generally these disturbances are of peripheral origin, and only a few cases are on record in which they have been found to be of central origin. A particularly interesting case of the latter variety, in which acute and rapidly fatal hemorrhagic transverse myelitis developed in the course of an attack of typhoid fever, has been reported by Schiff.[1] The patient was a waiter, 19 years old, and on the ninth day of the disease loss of control of the sphincters of the bladder and the bowels developed. The sensorium was clear and there was no pain. On examination, absolute motor paralysis of the lower extremities of flaccid type was found, with abolition of the reflexes, and almost complete flaccid paralysis of the upper extremities. There was, besides, absolute anesthesia for all varieties of sensation in all four extremities, and on the trunk to the level of the third costal cartilage, in front, and the spinous process of the second dorsal vertebra behind. The respirations were 36 in the minute, and there was marked subjective and objective dyspnea. With each inspiration, the thorax, instead of being elevated and distended, was depressed and retracted; while the abdomen, at the same time, instead of being retracted, became greatly bulged forward. These latter phenomena were attributed to paralysis of all of the thoracic respiratory muscles except the diaphragm, and also of the abdominal muscles.

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[1] Deutsches Archiv. f. Klin. Med., B. lxvii, H. 1 u. 2, p. 175

From the symptoms, it was concluded that the lesion was a transverse myelitis, situated between the fourth and fifth cervical segments. Death took place on the following day, a rapidly progressive bed-sore having meanwhile formed over the sacrum. Lumbar puncture five hours before death disclosed no abnormity. On post-mortem examination the intestinal lesions of typhoid fever in the second week were found, together with chronic tuberculosis at the apices of the lungs. The inner aspect of the spinal meninges was injected over the lower portion of the cervical cord, and the cord itself, at the level of the fourth, fifth and sixth cervical nerves, was swollen and spindle-shaped, deep-red in color, and softened. An inoculation from this situation remained sterile. After the cord had been hardened, numerous recent, small, indiscriminately distributed extravasations of blood were found throughout the spinal cord; also hemorrhagic infarction of the cord in the lower portion of the fourth cervical segment, involving almost the entire transverse extent of the gray mattter, enormous dilatation of the vessel, and distention with blood from the fifth to the eighth cervical segment, advanced degeneration of ganglion-cells in the anterior horns of the cervical cord, even in parts free from hyperemia and hemorrhage, extensive areas of degeneration in the posterior columns in the lower third of the fourth cervical segment. No micro-organisms of any kind could be found. The absence of fatty granular cells and round-cell accumulation, and multiplication of nuclei is attributed to the early stage of the inflammatory process. The presence of marked parenchymatous changes—cellular degeneration, swelling of axis-cylinders, acute focal degeneration and marked vascular changes—dilatation, hyperemia, increased permeability—with hemorrhage, at widely separated portions of the cord, is thought to be indicative of the effect of a common noxious agent, probably the toxins of the typhoid bacilli.

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### LEPROSY IN WISCONSIN.

Now that leprosy specialists and dermatologists are pointing out the risks of the introduction of leprosy into this country with our enlarged political and commercial relations, it is well to note any encouraging facts. It is well known that Scandinavian leprosy does not flourish in Minnesota, and we now have the testimony of Dr. Wingate, of the Wisconsin State Board of Health, that it is most decidedly on the wane in that State also. From an investigation recently made by him he finds, as reported in the *Milwaukee Journal,* only two cases existing within its boundaries, whereas formerly there were thirty. Leprosy is a disease dependent upon conditions all of which are not yet thoroughly explained, but its germ appears in our climate to find little suitable soil in the native-born population, at least up to date. What may be in the future is not certain, but the outlook can hardly be called bad at present. We may have more cases introduced, but the chance of any extensive dissemination of the disease, in our northern states at least, does not appear to be serious.

### THE UNSANITARY FLAT.

Much is now being written in regard to the housing of the working classes and the poor, and undoubtedly much good is being done in calling attention to their needs. Dr. George M. Gould has shown, in a comparatively recent publication, that charity practically directed toward sanitary dwellings for these classes who are supposed to be of specially limited means brings its financial reward in this world and is, as a rule, a good business venture. While we are giving our benevolent attention to the sanitary housing of the poor and the artisan class, there are still others who deserve it. The dwellings of those only moderately well off in our large cities are often far from sanitary in their construction and very conducive to degeneracy and disease. Since the building of flat tenements has become a common practice, this is especially the case, as inspection in many of our towns will show. The flat itself is not a model dwelling in a sanitary sense; the piling of families three or four tiers deep can never have the health possibilities of isolated dwellings, at least for children. As it is, we see these crowded horizontally so that frequently the rear portions have only a three or four foot well for light and ventilation. There are many externally showy flat buildings on respectable if not fashionable streets where the only daylight comes in through the front window, and the separate tenements, mostly caves of gloom, are rented to clerks and others of moderate means at twenty-five to forty dollars per month, when in justice no one should be obliged to live in them without liberal compensation for damages. The deserving poor need our sympathy and help, the improvident and dissipated should be prevented from injuring themselves and others by unsanitary living, and the much worked "workers" should get full justice. We have not, however, appreciated the needs and wrongs of a class who, though equally needing the benefits of good sanitary regulations, have thus far received little or no attention. The need of keeping up a respectable external appearance enforced by their social surroundings and occupation is a burden often beyond the means of the members of this class, who, though asking no sympathy, are often fully as deserving as those who demand so much from the social reformers of the day, and in any case, their sanitary welfare should not be neglected.

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## Medical News.

A PRIZE of 3000 lire has been awarded to Professor Grassi, in appreciation of his researches on the subject of malaria, by the *Venice Instituto de Scienze e Lettere.*

LEPROSY IN RUSSIA.—The statement has been made that on the south shores of the Transcaspian region villages exist in which the entire population is afflicted with leprosy. The disease has become worse within recent years, and active measures are being taken to prevent its spreading.

DENTISTS AT THE THIRTEENTH INTERNATIONAL MEDICAL CONGRESS.—The executive committee of the approaching International Congress of Medicine announces that dentists, who are not doctors of medicine, but are duly registered at home or abroad, are welcome as members of the Congress in the Section of Stomatology.

Application should be made at the general offices of the Congress, 21 rue de l'Ecole de Médecine, Paris.

EN ROUTE FOR INTERNATIONAL MEDICAL CONGRESS.—The *City of Rome* sailed June 30, having on board about three hundred physicians and their families, en route to Europe and the International Medical Congress which convenes in Paris, August 2. The physicians will make a tour of England, Ireland, Scotland, Germany and Switzerland before reaching Paris. The party is under the management of F. C. Clark, of New York City; and was organized by Drs. J. W. Cokenower, J. W. Pettit and Chas. Wood Fassett, who are delegates to the International Medical Congress.

## ILLINOIS.

### Chicago.

THE MEDICAL department of the University of Illinois has purchased the property adjoining its hospital building and now occupied by the West Division High School, for $180,000.

GEORGE P. DREYER, associate professor of physiology in the medical department of Johns Hopkins University, has accepted the chair of physiology in the College of Physicians and Surgeons, Chicago.

## PENNSYLVANIA.

BY THE will of Miss Catharine Long, who recently died in Lancaster, $2000 has been given the Lancaster Hospital.

MR. JAMES GAYLEY, of Pittsburg, has presented his alma mater—Lafayette College—the sum of $30,000 for the establishment of a chemical laboratory.

AT THE last meeting of the town council of Bridgeton, an ordinance was passed providing a penalty for the selling of impure milk. Persons guilty of such practice will hereafter be fined $25 for the first offense, and $50 for each subsequent offense.

A GIFT of $5000 has been made St. Timothy's Hospital, Roxburgh, by Mr. John H. Dearnley for the purpose of endowing a free bed in memory of his sister, Miss Martha Dearnley. It is learned that the lawn fete recently held there yielded the sum of $1000.

THE SECRETARY of agriculture has issued the annual report of the Dairy and Food Department; 107 suits have been instituted against violators of the pure food laws, of these 124 were for selling oleomargarin, 9 for violating the renovated butter law, 10 for adulterating food, and 4 for not observing the vinegar law.

#### CONFESSES ROBBING DR. SCHULTZE.

It is stated that through remorse that another person had been arrested for a crime which he had committed, Samuel Adams, of Allentown, has acknowledged that it was he who committed the assault on Dr. Schultze a few nights ago for the purpose of robbery. A watch and a sum of money was stolen at the time the assault was committed.

### Philadelphia.

THE NINE free public bath-houses maintained by the city have been renovated and are now ready for the summer season. Last year there were 3,460,506 bathers.

DR. JOHN V. SHOEMAKER has been appointed president of the municipal department of the Board of Charities and Correction in place of William H. Lambert, resigned.

The number of deaths occurring in the city during the past week was 380, a decrease of 75 over last week, and an increase of 1 over the corresponding period of last year. The principal causes of death were: apoplexy, 13; tuberculosis, 42; heart disease, 28; pneumonia, 28.

#### BEQUESTS TO CHARITY.

The following have been made known during the past week: A gift by Mrs. Hannah W. Sterling of $100 to the Association of Friends for the Relief of the Sick and Infirm Poor. A bequest of $1000 by Thomas Henry for the maintenance of a free bed in the Episcopal Hospital. By the will of Sarah T. Johnson, one-half of an estate valued at $18,000 has been given the Presbyterian Hospital and the Ladies' Aid Society of that institution. She also leaves her room at the West Chester Presbyterian Hospital to its trustees. Through the will of John D. Moore, $500 has been given the Hospital of the University of Pennsylvania. Robert C. Floyd made a contingent bequest of $500 to the Masonic Home.

#### HOSPITAL SUED.

Suit has been entered against a certain hospital of this city for the recovery of $20,000 damages for the loss of his son who, it is alleged, died as the result of the administration of ether. It appears that one of the assistants was an unwilling witness and the question was raised in Common Pleas Court whether or not the physician could be compelled to give such information to the attorneys for the plaintiff. Attorneys for the defendants, however, claimed that the physician was an adverse party to the suit and therefore could not be compelled to testify before the trial. Judge Beitler said he could not understand why a reputable institution like that of the defendant and its employees should guard with secrecy and silence the death of one of its patients. Attorneys for the defendants replied that neither the institution nor the employees desired to keep secret the circumstances of the death of the plaintiff's son, but they did not want to give out facts which might be used against them if they were not legally required to do so. The Court held the matter under advisement.

## PARIS LETTER.

#### BUBONIC PLAGUE.

Considerable is written about this subject at present in the Paris medical newspapers. Two weeks ago Dr. Lochelongue, an Egyptian sanitary inspector, wrote an article on the bubonic plague and the convention of 1897, which was held to regulate the international rules for quarantine. He showed in his article that the methods carried out at present are quite ineffectual, judging from the recent discoveries as to the etiology of the disease. Ships might be infected by rats without a single passenger being ill at the time of arrival in port; and on the other hand, it could hardly be said of a town that it was free from the germs of plague, when no longer any cases were reported, as the epidemic might still be raging among the rats. New measures must be adopted to prevent the spread of the plague, which would be much favored by the opening of new lines of traffic outside the Suez Canal. The article was accompanied by a map, showing the railway lines that are to be constructed through Asia Minor and Arabia.

Dr. Netter, who plays quite a rôle in France as a hygienist, has written an article on the bubonic plague in Australia and South America. This paper was published in the *Presse Médicale*, May 20, and showed by means of a map how the plague had spread. It was first spoken of in Honolulu, New Caledonia and Manila, and has been discovered also at Sidney, Adelaide and Brisbane. Dr. Netter insisted on the necessity of having recourse to bacteriologic examinations, when the diagnosis of a case was not clear. It must be remembered that plague, even when not recognized at first, has remained rather circumscribed, as is shown by the following example: In Alexandria there were ninety-two cases and forty-five deaths in a population of 320,000. Measures are, however, to be carried out both in Paris and in Marseilles to prevent the possibility of an outbreak. The quarantine at Marseilles will be very strict, on account of the recent epidemic in Port Said and Smyrna.

#### DESTRUCTION OF RATS.

Rats are to be exterminated, such is the *mot d'ordre* both at Marseilles and Paris. The mayor of Marseilles has issued a notice to the effect that a premium of one cent for each rat and half a cent for each mouse will be paid on delivery of one of these animals, dead or alive. This notice was given May 15 of last month, and up to June 1, 686 premiums have been paid. This is not, however, a sufficient number, and experiments will be made to discover a means of getting rid of these pestiferous beasts by some form of disease. It is well-nigh impossible to poison them on board ship, where they are most to be feared, as the stench that would arise from their dead

some of the more important scientific bodies. During the last years of his life, he spent most of his time in prison investigations. He visited most of the famous penal institutions of the world and secured the adoption of many reforms.

Richard Hartloff, M.D., Evansville, Ind., died June 18, aged 55 years. He was graduated from the Louisville Medical College in 1871, and afterward studied in the University of Vienna, Austria. He was a member of the staff of the Protestant Deaconess' Home and Hospital, Mississippi Valley Medical Association, Indiana State Medical Society and of the American Medical Association. At a meeting of the Vanderburgh County Medical Society, held June 19, the following resolutions were unanimously adopted:

Whereas, In the death of Dr. Richard Hartloff, the society has lost one of its most faithful and useful members, one who has departed this life in the height of his usefulness, his whole career having been one of honest, faithful and efficient application to his profession, to the world, upright and just, to his patients, skilful, kind and charitable, and to his brother physicians courteous, generous and honorable; therefore, be it

*Resolved*, That we extend to his family our sincere sympathy in their bereavement, and while we mourn with them, we also rejoice that Dr. Hartloff's life was pure, and no act of his has marred it.

*Resolved*, That this statement be spread on the minutes of the Society, and a copy sent to the family of the deceased and to the Journal of the American Medical Association.

Edwin Walker,
L. D. Brose,
B. S. Rose,
*Committee.*

Nelson Watts, M.D., died in Chico, Cal., June 14. He was born in Ohio, in 1830 and educated in the schools of the state, receiving his diploma from the Cleveland Medical College, in 1865. He practiced in Indiana, Nebraska and different places in California, before locating in Chico, in 1870, where he has since resided. He was a member of the State Medical Society and the American Medical Association.

Burke Pillsbury, M.D., Harvard, 1872, settled in Middletown, N. Y., in 1874, and was pension examining surgeon since 1877. He was of distinguished New England lineage and a direct descendant of one of the "Minute Men," who responded to the Lexington alarm in 1775. He died a few days after an operation for gall-stones, on June 18, aged 52 years.

Ernest J. Risch, M.D., a graduate of the University of Brannschweiz, 1843, died at his home in Brooklyn, N. Y., on June 17, aged 77. He was a native of Goslau, Germany, and for years was a practicing surgeon in that country. He was a veteran of three German wars—Schleswig-Holstein, Hanover, and Denmark-Prussia. He came to South Brooklyn in 1870.

George M. Beahes, M.D., Ann Arbor, Mich., died June 15, aged 69 years. During the Civil War he was assistant-surgeon of the First New York Cavalry and afterward surgeon of the Thirteenth New York Infantry. He was with McClellan in the Peninsular campaign and with Sherman in his march to the sea.

Frederick Swingley, M.D., died at his home in Bucyrus, Ohio, June 14, aged 92 years. He was graduated from the Ohio Medical College in 1834 and since 1843 had practiced in Bucyrus.

W. H. Fry, M.D., died at Keyser, W. Va., June 16, of consumption, aged 44. He was a native of Preston County, in the same state, and settled in Keyser in 1883.

Geo. W. Haymaker, M.D., died in Charlestown, Ind., June 12. He was graduated from the Kentucky School of Medicine, Louisville, 1857.

Association of Baltimore and Ohio Railway Surgeons.—This Association met in Atlantic City, June 1 and 2. The following officers were elected: president, R. B. Short, Union Mills, Ind.; first vice-president, F. J. Evans, Chester, Pa.; second vice-president, J. W. Hays, Albion, Ind.; secretary and treasurer, G. A. Davis, Summit, W. Va.; assistant secretary, W. A. Bailey, Leisenring, Pa.

# Miscellany.

**A Modest and Munificent Giver.**—A gentleman who has taken every precaution to keep his gift a secret, at least for the present, has placed to the credit of the Presbyterian Hospital of New York the sum of $200,000.

**A Medical Queen.**—Queen Marie Amelie, of Portugal, is said to have completed the medical course and received the diploma entitling her to practice medicine. During the absence of the king, who has announced his intention of visiting the Paris exposition, in August, the queen will serve as regent.

**Vagus in Measles.**—Death in severe cases of measles is due to the effect of the measles toxin on the vagus, first irritating and then paralyzing it. This theory, advanced by Cioffi, is supported by many observations (*Rif. Med.*, 1900, 51 to 53) and explains the frequent purulent otitis by the irritation of the vagus in its meningeal branches, predisposing to simple or tubercular phlogistic affections.

**Address of Chairman, Section on Stomatology.**—By a typographical error, a portion of the derivation of the term "peridentitis" was omitted from this address. The sentence beginning on the fifth line from the bottom of the first column of p. 1559 of last week's Journal should read: "*Peri* is a Greek term of Latin origin meaning around, about or near; *dent*, or *dens* is the Latin for tooth, and *itis* is also a Greek term of Latin origin," etc.

**State Leper Home.**—Louisiana has the only home for lepers in the United States. In the past two years there have been forty-five inmates under treatment, and at present there are thirty. The oldest patient is a woman of 80 years, the youngest a boy of 10. The state has appropriated $20,000 for the purchase of lands and buildings, but nothing has as yet been done, as the sum is so inadequate that efforts are being made to have it doubled.

**Hot Cloths, Followed by Fanning to Reduce Temperature.**—Dr. R. S. Walker, Toledo, Ohio, read an article before the Toledo Medical Association on "Treatment of Typhoid Fever in Adults," in the course of which he explained his method of using hot cloths followed by fanning to reduce temperature. He employs a double thickness of cheese-cloth, of the length of the body, wrung out of hot water, which is laid over the body while the patient is lying on one side. Two attendants then use palm-leaf fans vigorously for at least fifteen minutes. This acts as efficiently as a cold plunge in its antipyretic effects, is much better as a diuretic, and is not so exhausting as the regular Brand treatment.

**A Draconian Provision.**—The Board of Health of Trenton, N. J., adopted an amendment to the Health Code, placing consumption in the same category with smallpox, diphtheria, yellow fever, and other contagious or infectious diseases. It provides fines and imprisonment for physicians who fail to report cases within thirty days after diagnosis. There is to be isolation and disinfection. After death, all clothing, bedding, and other articles likely to contain the germs are to be burned. When reporting existing or suspected cases the physician must forward sputum in receptacles which are to be furnished by the Board of Health in order that cultures may be made. Hospitals are not exempted from the general provisions.

**Excursion to Aix Les Bains.**—At a recent meeting of the Savoy Medical Association a committee was appointed to extend an invitation to the American physicians who will visit France during the summer. Resolutions were adopted with a view to the instruction and entertainment of all who may choose to visit this charming watering-place. The railroads and hotels will make very low rates and the entertainment will consist of a banquet, special fetes at the two grand theaters, trips up the switch-back railway, excursion on the lake, and free baths at all thermal institutes. The invitation is extended by the chairman of the committee, Dr. Thomas Linn, who is an American. It has been suggested that a party be made up to leave Paris July 29, returning August 1. Those wishing to join the party should send their names to Dr. Charles Wood Fassett, United States Press Pavilion, Esplanade des Invalides, Exposition Universale, Paris, France.

**Superstition Among the Chinese.**—The disturbances in China and the peril of foreigners render peculiarly interesting Dr. Matignon's recently published work: *"Superstition, Crime et Misère en Chine."* Our confrère has been attached to the French legation at Peking for a number of years and has had peculiar opportunities for studying the inner life of the people. He states that the Chinese, from the highest to the lowest, are superstitious to an absolutely inconceivable extent. Every act of their life, even the most trivial, is shackled by geomancy, necromancy, sorcery, the evil-eye and other childishnesses. The higher classes claim to be above these superstitions, but in private they are as credulous as the most ignorant coolie.

**Strangyloides Intestinalis.**—Dr. Wm. Sidney Thayer reports two cases of dysentery produced by this intestinal parasite, which is the first time it has been observed in this country. The first case occurred in a woman, a native of Austria, and was seen at the Johns Hopkins Hospital four years ago. Upon her death evidences of dysentery were apparent and also an abscess of the liver. The second case occurred recently in a newsboy (white) from Richmond, Va. There was obstinate dysentery, from which, however, after some months he recovered, gaining 22 pounds, and left the hospital for his home in Virginia. As far as can be learned he has continued well. The treatment consisted of large doses of bismuth, rectal injections of quinin, and thymol. The last seems to exercise a specific influence over the parasite. It is not known how the boy acquired the parasite, as he had not been out of the country. Dr. Thayer urged more thorough and systematic examinations of the intestinal contents. Important discoveries awaited, he thought, such investigations. Further examination will probably show that the parasite in question is not so infrequent in this country as is believed.

**Yellow Fever at Quemados, Near Havana, Cuba.**—Reports to the Surgeon-General of the Army from the chief surgeon, Division of Cuba, dated June 18, 1900, give the particulars of an outbreak of yellow fever at Quemados, a village about half a mile from the large camp of United States troops, known as Camp Columbia, six miles from Havana. The first case, which occurred May 16, was mild and no physician was called in, but a few days later another case, of a severe character, was discovered in the same house. Cases were reported from time to time until at the date of the report, 13 civilians, all Americans, 1 officer and 5 enlisted men on detached duty from the camp had been affected. Five of these had died, 1 sergeant and 4 civilians, up to June 18, but the telegraph has since announced the death of the officer. The non-immune population of the village consists of 140 persons, of whom 84 are white Americans. From the mode of origin of the cases and the absence of any history of recent introduction of infection it is considered fair to assume that the present outbreak is due to the presence of old germs existing in the occupied bulidings. There was no yellow fever in Quemados during the summer of 1898. A strict quarantine is maintained by Columbia barracks against the village and arrangements have been made to meet a possible invasion of the military camp.

**Physician and Diplomat.**—According to a clipping from a Harlem, N. Y., bi-weekly, Dr. Eduardo Wilde, the new minister plenipotentiary, is the latest addition to the diplomatic social set in Washington. He was born in Buenos Ayres and was educated in the National College. After receiving his degree he was appointed physician-in-charge of the cholera lazaretto of his native city. His record at the hospital and at the college, where he was still studying, won for him from his alma mater the first prize of 2500 pesos. With these opportune earnings, he attended lectures at Paris, Leipsic, Berlin and London. He has the reputation of being a progressive sanitarian and is gratefully remembered for his fearlessness in dealing with yellow-fever epidemics, for which he was awarded two gold medals. In 1875, he was elected to the provincial legislature from the province of Buenos Ayres; the next year he was elected to the National Congress from the same province and was later re-elected for a four-years term. In 1882, he was appointed minister of justice and public instruction, and in 1883, minister of the interior. He visited this country twice as an observer of American institutions, in an official capacity, and as a result wrote a book which is widely read in his own land. He entertains optimistic views in regard to broadening the commercial relations between the two republics.

**Casualties in the Philippine Islands.**—In response to a resolution of the Senate of May 22, 1900, the Secretary of War submitted a statement of the number of soldiers who have been killed, died from wounds, disease and suicide and the number wounded in action or otherwise among the regular and volunteer troops serving in the Philippine Islands, from July 31, 1898, to May 24, 1900, together with several other interesting tabulations by the Adjutant-General of the Army and a letter from the surgeon-general on the prevalence of disease among the troops during the period mentioned. The casualties among the regular troops were: Officers wounded 37, enlisted men 721. Officers killed 17, died of wounds 7, died of disease 10, died by suicide 2; total 36. Enlisted men killed 176, died of wounds 67, died of disease 658, died by suicide 19; total 920. Among the volunteer troops: Officers wounded 91, enlisted men 1115. Officers killed 18, died of wounds 6, died of disease 12, died by suicide 5; total 41. Enlisted men killed 262, died of wounds 103, died of disease 480, died by suicide 9; total 854. Aggregate: Officers wounded 128, enlisted men 1836. Officers killed 35, died of wounds 13, died of disease 22, died of suicide 7; total 70. Enlisted men killed 438, died of wounds 170, died of disease 1138, by suicide 28; total 1774.

Some comparative tables are given, one of which shows the casualties in the various actions in which General Shafter's army was engaged around Santiago, Cuba, June 22 till July 17, 1898. These aggregate 101 officers and 1344 men wounded, with 21 officers killed in action and 5 died of wounds, and 222 enlisted men killed in action and 70 died of wounds. In the South African War, from October 11, 1899, till April 28, 1900, there were 218 officers and 2062 men killed in action; 53 officers and 492 men died of wounds and 64 officers and 2028 men died of disease. During the Franco-Prussian War of 1870-71, the German Army had 85,482 wounded and 28,277 killed and died of wounds. At the battle of Gravelotte the killed numbered 4449 and the wounded 15,189.

In Surgeon-General Sternberg's letter dated May 28, 1900, he says that the percentage of sick, disabled, and invalided soldiers serving in the Philippines from August 1, 1898, till the present time varied from month to month. At the beginning of the period mentioned the sick lists, including injuries, constituted 5 to 6 per cent. of the command. The rate increased to 10 or 11 per cent. during the first occupation of Manila. During the progress of the campaign against the insurgents, Februrary till July, 1899, the troops became exhausted by fatigue and exposure, and the sick list for some time reached as much as 25 per cent. of some of the regiments. Since then the average rate of sickness has varied from 6 to 10 per cent. of the commands.

The most prevalent diseases have been intestinal affections and malarial fevers, typhoid fever, and smallpox. Lung diseases have not been common, and rheumatism, notwithstanding the exposures of the troops, has not been in excess. Acute dysentery has been the most dangerous of the diseases, the deaths caused by it having been equal to an annual rate of 4.6 per 1000 men. Typhoid fever took second place in order of fatality, it having caused deaths equal to an annual rate of 4 per 1000 men. The mortality from smallpox was equal to 2.25, while that from malarial fever was only 1.1 per 1000.

Medical officers have been earnest in their recommendations for the welfare of the men, and commanding officers have usually acted promptly, so far as lay in their power, to carry the recommendations into effect. It has been difficult, however, and, indeed, impracticable, to control many of the unsanitary conditions, particularly during the progress of the campaign against the insurgents. In many localities the ground was saturated with water and drainage impossible. Efforts have been made to suppress the sale of native soft drinks and spirits of local manufacture and to prevent the troops from frequenting houses of low-class natives where infectious diseases are exceedingly common. Special attention has been given to the quarters of the men and to the care of the sinks and earth closets, to the purification of the drinking water, to the supply and preparation of food, the supervision of the laundry work, and the installation of shower baths where there were no other facilities for bathing. Smallpox was controlled, after some difficulty, by isolation of the individual cases and vaccination of the whole command. The difficulty arose from the inability of the medical officers at first to procure fresh vaccin. That which was sent from this country deteriorated during the long voyage. Ultimately fresh virus was obtained by cultivation in the laboratory of the board of health of Manila.

Lastly, the comparative losses by death among the white and the colored troops is expressed by the annual rates of 31.91 and 34.51, respectively, per 1000 of strength.

**Poisoning by Coal-Gas and Its Treatment.**—While the term "asphyxiation" is usually applied to the morbid changes which take place as the result of poisoning by coal-gas, when fully considered, this application does not seem to be well founded. Asphyxia means suffocation; but death, due to poisoning from coal-gas is not caused by suffocation, but by the action of one of the ingredients of the coal-gas—carbon monoxid—on the hemoglobin of the blood. According to the analysis of Mr. N. Wiley Thomas, of the Bureau of Gas of Philadelphia, the formula of coal-gas is as follows: Hydrogen 32.20; methane (CH) 29; carbon monoxid (CO) 22.10; illuminants 10.01; nitrogen 3.88; carbon dioxid ($CO_2$) 2.25; and oxygen 0.56 per cent. Besides these ingredients, the following also enter into the composition of coal-gas; ethylene ($C_2H_4$); acetylene ($C_2H_2$); carbon disulphid ($CS_2$); vapors of volatile liquid hydrocarbons and hydrogen. The principal ingredient which produces the illumination is methane or marsh-gas. Carbon monoxid is an impurity, is combustible, has no odor, is very poisonous, and when it enters the system, it searches for the hemoglobin, for which it has a profound affinity and, uniting with it, produces a new compound—carbon monoxid hemoglobin—thus displacing the atom of oxygen to which the former is repellent. This displacement is poisonous through such action; hence the term "asphyxiation" is not correct. This chemical change generally takes place rapidly, but it might also occur during long periods of time, and be termed "chronic coal-gas poisoning." In such cases we would expect to find a diminution in the amount of hemoglobin. As to the proper treatment, Darrah (Philadelphia Pathological Society Nov. 9, 1899) spoke of certain experiments made on dogs, that may be of advantage in the elucidation of the subject. It was stated that when animals breathe pure oxygen and carbon monoxid, the latter is promptly taken up by the hemoglobin, to the exclusion of the oxygen, and can not be displaced by it. Animals show dizziness, low temperature, rapid and feeble pulse, while respiration is increased in frequency and depth. The animals were treated with strychnin, brandy, digitalis, inhalations of oxygen; and saline solution and peroxid of hydrogen were injected hypodermically but no good resulted. On the other hand, the introduction of new-blood, or blood containing new hemoglobin seemed to be beneficial. After blood-transfusion into the jugular vein, dogs poisoned with coal-gas, in some instances, recovered instantly. Before transfusion it seeemed best to remove first a part of the blood from the animal, thus withdrawing the poisonous product. The blood used in these experiments was taken from the carotid arteries of other dogs.

**Disinfection of Sewage at Havana, Cuba.**—On March 2, Major Walter Reed, Surgeon, United States Army, was directed by the Secretary of War to proceed to Havana, on official business, pertaining to an investigation as to the practical use of electrozone as a disinfectant and germicide in that city, and to report the result of his investigations to the Surgeon-General of the Army. A plant for the electrolysis of sea-water, on what is known as the Woolf system, was put into practical operation in Havana in July of last year. It consists of eight circular wooden vats, each having a capacity of 1000 gallons and provided with 52 positive and 53 negative electrodes, the former consisting of an alloy of platinum and iridium and the latter of zinc. These vats are arranged in pairs and, when in operation, the vats of each pair receive the same strength of electric current from the dynamo provided for them. The vats are filled with sea-water at 7 a.m. daily and a current having a strength of 3000 ampères with a voltage of 12-13 is passed through the water for 2½ hours. At the end of this time, 200 gallons are withdrawn from each vat and replaced by an equal quantity of fresh sea-water, and this is repeated every half-hour thereafter during the day's run of eight hours. It is claimed that the water withdrawn from the vats has an average chlorin strength of .16 per cent., equal to 100 grains of chlorin to the gallon. This is distributed in wagons for use in disinfecting sewers, street sprinkling and household disinfection. Major Reed found that, although a certain chlorin strength was supposed to be obtained, it was not reached in practice. In observations covering a period of ten days, he found that the available chlorin varied from a maximum of .142 to a minimum of .021 per cent., or from 89.9 to 12.2 gr. per gallon. Theoretically, a current of 3000 ampères should produce 20 grains of chlorin per gallon per hour, but only 12 grains per gallon was found by test. A chlorin strength of less than .15 per cent. can not be relied on for prompt disinfection, and a solution containing .25 per cent. is desirable. He concludes, therefore, that the electrolyzed sea-water, as used in Havana, does not possess sufficient strength for efficient and reliable disinfection, and that in the relatively small quantity in which it is introduced into the sewers, it can act only as a deodorizer. For street sprinkling it is valueless except in so far as it allays dust; and under these conditions, direct sunlight is more efficient as a disinfectant than any sprinkling. As a surface disinfectant for walls and floors of houses, a strong electrozone solution would be effective, but not the weak one hitherto used. For covering the surface of material recently removed from sewers while taking it away, the electrolyzed sea water is of value in effecting surface disinfection and the removal of foul odors. Major Reed's experiments show that a solution of sodium hypochlorite of equal chlorin percentage is just as effective in germicidal action as electrozone, and the same is true of chlorinated lime to which enough of hydrochloric acid has been added to free the whole of the chlorin. Comparing the cost of manufacture, he shows that a chlorinated lime solution having a strength of 146 grains of available chlorin per gallon, could have been used in Havana in quantity equal to that of the electrozone used from July 1, 1899, to March 31, 1900, at a cost of $17,802, while on the other hand the cost of the electrozone plant, the interest on this cost and the daily expenses of management, amounted to $87,033, as the cost of furnishing a like quantity of electrolyzed sea-water having no particular standard of strength, but certainly of a less strength than that which could have been obtained from the chlorinated lime. He, therefore, disapproves of the extension of the Havana system of disinfection to other cities in Cuba.

**The Hospital Corps Soldier in Emergencies.**—A letter dated April 16, 1900, Sogod, Cebu, P. I., has been received at the Surgeon-General's office, Washington, D. C., from captain T. S. Bratton, assistant-surgeon, United States Army, in which he commends the good judgment, fortitude and skill shown by Private Samuel Jones, of the Hospital Corps, in a case which is stated as follows:

> I have the honor to inform you that about March 1, at this place, a native woman was badly cut by her husband with a bolo. Her right fore-arm was cut in several places, producing compound fractures; there was a deep horizontal gash from the right external angular process to the ear, the incision extending into the orbital cavity and, as described by some of the attendants, the eyeball hanging out. There were also several long deep gashes across her back.
>
> I was in Cebu at this time on a Board, and Private Samuel

Jones, of the Hospital Corps, undertook the case. With the assistance of Private Henry Becker, also of the Hospital Corps, who administered the chloroform, he, at night, by candle-light, replaced the eyeball, which was uninjured and sewed up the incision. He also sewed up the incisions on the back. The patient would not consent at this time to have the arm cut off, and it was dressed antiseptically; but in a day or so the arm began to turn black, and Private Jones, believing that gangrene was setting in, again advised operation, which was then consented to. Private Becker again giving chloroform. Private Jones amputated above the elbow by the circular method.

When I arrived a few days later I found the patient doing very well and to-day her arm is entirely healed. There is still some discharge from the conjunctiva, but I think it will, in a few days, be all right.

At first sight it seems surprising that an enlisted soldier should have the knowledge and skill to deal with a case of this kind; but those who are familiar with the course of instruction given to the members of the Hospital Corps at the army schools and with the experience many of these men have gained in the field hospitals in the Philippines, feel confident that the educated United States Army hospital orderly will seldom fail to meet the emergency.

**Essential Progressive Pernicious Anemia in Childhood.**—Theodor, in the *Wiener Med. Woch.*, 1900, No. 13, p. 620, has reported the case of a boy, 11 years old, who had always been well except for an attack of measles. About 1½ years before coming under observation it was noticed that he was extremely pale, that he became fatigued with undue readiness, that spots appeared before the eyes and that he ate but little. The feet were swollen from time to time, and vomiting set in, together with abdominal pain. The face presented a waxy pallor. The spleen, liver and lymphatic glands were not enlarged. The condition of the patient grew gradually worse, and death took place in the course of a few weeks, with symptoms of pulmonary edema and profuse, bloody diarrhea. The blood exhibited both degenerative and regenerative changes. The hemoglobin was greatly diminished in the majority of the red-blood corpuscles. Poikilocytosis was marked, and numerous megalocytes were present. Anemic or polychromatic degeneration was not uncommon, especially in macrocytes and megaloblasts. The blood-plates were considerably increased in number. Erythroblasts and nucleated red blood-corpuscles were present, the latter in enormous numbers shortly before death.

**Some Points in the Diagnosis and Treatment of Pulmonary Tuberculosis.**—In an address delivered recently in the Charité of Berlin, Senator (*Berliner Klin. Woch.*, 1900, Nos. 15 and 16) pointed out that while the presence of tubercle bacilli in the sputum is conclusive as to the existence of pulmonary tuberculosis, the diagnosis often can and must be made without the aid of this demonstration. Among the other symptoms, two are deserving of special consideration, namely, hemoptysis and so-called apical catarrh. Hemoptysis may be attributed to tuberculosis of the lungs when no other cause for its occurrence can be made out. It is, of course, important to differentiate accurately between hemoptysis and hematemesis; and while this is often easy, it is sometimes extremely difficult, if not impossible. The difficulty will naturally be greatly increased should the two conditions coexist.

When it is decided that hemoptysis has occurred, the possibility of its dependence upon traumatism, external or internal, must be taken into consideration. Among other causes of hemoptysis are circulatory disorders, inflammatory processes, the presence of neoplasms in the lungs, aneurysm, especially of the thoracic aorta, the hemorrhagic diathesis and the presence of parasites in the respiratory tract. So-called vicarious hemorrhage will, in the majority of cases be found to depend upon pulmonary tuberculosis. The greatest difficulty in diagnosis arises when conditions, other than tuberculosis, that give rise to infiltration and ulceration, are present; as for instance, syphilis or parasites.

The discrimination depends upon repeated examinations of the sputum, and possibly, exploratory puncture. In the presence of neoplasms the dulness is disproportionately great, as compared with the auscultatory; while in the presence of tuberculosis the conditions are often reversed. With the former, the chest may be enlarged, rather than contracted, as is found in the latter condition. Exploratory puncture would be decisive. The differentiation of inhalation-pneumonia and syphilitic pneumonia may be extremely difficult, even if possible. With the latter, the history and the presence of other lesions and the fact that syphilitic lesions generally begin at the hilus, and the tuberculosis at the apex, are especially important. Further, the nutrition is better preserved in syphilis, fever is generally absent and hemoptysis is rare. Accuracy in diagnosis can scarcely be expected when tuberculosis is present in association with one or another of the diseases with which it may be confounded. Here, a careful study of the history and of the course of the case may afford the basis for a correct conclusion. In the treatment of hemoptysis, whether large or small in amount, absolute mental and physical rest should be observed. Sulphuric acid may be administered. The diet should be simple and unirritating, and rather scanty. An ice-bag may be applied to the chest. Ergot and ergotin are much employed, but their usefulness it at least open to doubt. Hydrastis, hamamelis, stypticin, and lead acetate are more satisfactory. Gelatin may be employed, although it can not be given subcutaneously but must be administered in larger doses by the mouth. A solution of from 4 to 6 drams in 6 ounces of water, with the addition of sugar, oleo-saccharin, or fruit-juice, may be taken in half-ounce doses. Morphin is at least as useful as the so-called hemostatics, if not more so, as it quiets the patient, lessens the cough and favors sleep. Dionin may be employed instead of morphin. If the heart's action is excessive and can not be controlled by the ice-bag, digitalis may also be given. Three other procedures are applicable in the presence of obstinate and persistent hemoptysis: 1, ligation of the extremities; 2, the inhalation of astringent remedies, such as tannic acid, ferric chlorid and alum, and 3, the use of alum-whey, although not too much must be expected from any of these.

In the presence of slight evening fever, the patient should take only a spare evening meal, should avoid wine, strong tea and coffee, should retire early, use a light bed covering, and receive cool sponging. If fever occurs at a given time each day, antithermic medicaments may be employed, the best of which are phenacetin, lactophenin, citrophen and pyramidon. The addition of quinin may prove useful. If fever persists throughout the day, pyramidon may be administered in small doses, of 1 to 1½ grains, in sugar-water, hourly. In addition, or instead, repeated sponging may be practiced. Sponging with spirit of camphor, fifty parts and menthol, two parts, is cooling and refreshing. The external application of guaiacol, by means of a brush or with friction, is more efficacious, from 7½ to 22 minims being cautiously applied. If night-sweats are troublesome applications of cool water or vinegar-water, or aromatic fluids, or inunctions of fat or bacon, may be employed. Painting the skin with formol is more efficacious, care being taken to prevent inhalation of the vapor. Belladonna; atropin; agaricin; camphoric acid, 15 grains in capsule; sodium tellurate, from 1/3 to ¾ gr.; picrotoxin, 1/30 gr.; and sulphonal, from 15 to 30 gr. have been employed. Recently cotoin has been recommended in doses of from 1/3 to ½ gr.

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### CHANGE OF ADDRESS.

Dr. J. H. Johnson, from 316½ Spring St. to 357 S. Spring St., Los Angeles, Cal.

Dr. U. Roberts, from 3712 Williams St., to 53 Clarkson St., Denver, Colo.

Dr. J. W. Smith, from Cripple Creek to Creston, Colo.

Dr. J. A. Butler, from Washington, D.C., to 251 Winter Place, Jacksonville, Fla.

Dr. A. E. Kay, from 1060 Warren St., to 953 W. Lake St., Chicago.

Dr. P. A. Loomis, from 552 Jackson to 330 Warren Ave., Chicago.

Dr. H. Mertens, from Charlottenburg, Berlin, Germany, to 308 Jackson Boul., care Mrs. Cook, Chicago.

Dr. S. T. Richman, from 5729 to 5709 Wentworth Ave., Chicago.

Dr. R. Stewart, from 3500 to 3459 State St., Chicago.

Dr. T. E. Wetzel, from Salt Lake City to Council, Idaho.

Dr. M. E. B. Thompson, from 902 Race St., Cincinnati, Ohio, to 2954 Cottage Grove Ave., Chicago.

Dr. R. M. Murphy, from Akron, Ohio to Elkhart, Ind.

Dr. J. D. Brownson, from Elkader to Monona, Iowa.

Dr. E. C. Hackett, from 339 S. Lincoln St., Chicago, to 121 W. 14th St., Dubuque, Iowa.

Dr. W. H. Winterbotham, from Chicago to Salina, Kans.

Dr. Joe And, from 827 6th St. to 722 W. Chestnut St., Louisville, Ky.

Dr. J. F. Burchett from Wesleyville to Mouth of Laurel, Ky.

Dr. G. M. Warner, from 904 2d St. to 814 3d St., Louisville, Ky.

Dr. H. N. Blum from 1200 Milan St. to -404 Magazine St., New Orleans, La.

Dr. W. H. Seton, from New York City to Emmitsburg, Md.

Dr. E. E. Doble, from Barlow, Fla., to 52 Cross St., W. Quincy, Mass.

Dr. G. J. Gordon, from Philadelphia, Pa., to 1315 N. Washington Ave., Minneapolis, Minn.

Dr. W. J. Swartz, from Minneapolis to 93 Cambridge Ave., St. Paul, Minn.

Dr. J. M. Tirrell, from 617 15th Ave. S. E., to 526 W. 28th St., Minneapolis, Minn.

Dr. J. Bursma, from Sand Lake to Altoona, Mich.

Dr. W. B. Holden, from 28 33d St., Chicago, to 42 Hanover St., Battle Creek, Mich.

Dr. J. Murphy, from Kenosha, Wis., to Bangor, Mich.

Dr. L. A. M. Riemens, from 640 Congress St., Chicago, to 284 Maple St., Holland, Mich.

Dr. E. B. Hults, from St. Louis to Gant, Mo.

Dr. R. C. Collins, from Omaha to Hendley, Neb.

Dr. R. B. Johnson, from 644 W. Harrison St., Chicago, to Norfolk, Neb.

Dr. J. L. Magill, from Seneca, Kans., to Gilead, Neb.

Dr. C. Major, from Denison, Iowa, to 421 S. 11th St., Omaha, Neb.

Dr. O. W. Goss, from Lakeport to Laconia, N. H.

Dr. C. Cone, from 1616 Eutaw Place, Baltimore, Md., to 70 Park Ave., Asheville, N. C.

Dr. H. T. Summersgill, from Charlotteville, Va., to Wilmington, N. C.

Dr. W. L. Taylor, from 50 E. Range St., Charlotteville, Va., to Townesville, N. C.

Dr. F. Le Moyne, from Melvale, Md., to The Leighton, Point Pleasant, N. J.

Dr. B. I. Preston, from 31 to 56 Meigs St., Rochester, N. Y.

Dr. A. Brinkman, from 176 Bergen, Brooklyn, to Central Valley, N. Y.

Dr. W. W. Palmer, from Bellevue Hospital to 451 W. End Ave., New York City

Dr. P. J. McCaffrey, from 68 Luther St. to 1506 Superior St., Cleveland, Ohio.

Dr. E. W. Woodford, from 273 Hanover to 373 Jennings Ave., Cleveland, Ohio.

Dr. J. A. McKenna, from 1403 N. 17th St., Philadelphia to Lansdowne, Pa.

Dr. C. A. Smith, from The Grand, Atlanta, Ga., to 1003 Spruce St., Philadelphia.

Dr. J. M. Doherty, from Baltimore, Md., to 403 Atwell Ave., Providence, R. I.

Dr. E. W. Carpenter, from Charleston to Hyman, S. C.

Dr. B. F. Sloan, from 12 Meeting St., Charleston to Ninety-Six, S. C.

Dr. L. C. Stephens, from Blockville to Greenville, S. C.

Dr. G. W. Drake from Hollins, Va. to Monteagle, Tenn.

Dr. J. P. Lokey, from Galveston to Daugherty, Texas.

Dr. C. W. Allen, from Charlottesville to Box 18, Amherst, Va.

Dr. R. P. Jones, from Charlottesville to 108 W. Bute St., Norfolk, Va.

Dr. B. C. Keister, from South Boston to Roanoke, Va.

Dr. P. D. Lipscomb, from Charlottesville to Crozet, Va.

Dr. F. E. Sellers, from Charlottesville to Mauzy, Va.

Dr. N. S. Whitmore, from Charlottesville to Mt. Sidney, Va.

Dr. T. H. Wright, from Charlottesville to 115 Middle St., Portsmouth, Va.

Dr. E. A. Hill, from West Union to Wolf Summit, W. Va.

Dr. W. H. Workman, from O'Keeffe to McDowell, W. Va.

Dr. W. V. Bryant, from 460 Adams St., Chicago to 11 E. Gilman St., Madison, Wis.

Dr. F. V. Watson, from Baldwin to Roberts, Wis.

Dr. H. A. Reinhard, from 460 W. Adams St., Chicago, to 2510 Cedar St., Milwaukee, Wis.

Dr. R. E. Green, from 460 W. Adams St., Chicago to St. Marys Hospital, Milwaukee, Wis.

Dr. J. W. Ehmer, from 155 E. 25th St., Chicago to Theresa, Wis.

Dr. E. E. Maxey, from Baltimore, Md. to Caldwell, Idaho.

## The Public Service.

### NAVY CHANGES.

Changes in the Medcal Corps of the U. S. Navy, for the week ending June 16, 1900.

Surgeon T. A. Berryhill, ordered to the naval laboratory and department of instruction, Brooklyn, N.Y., June 14.

P. A. Surgeon F. C. Cook, ordered to temporary duty at naval hospital, Norfolk, Va.

Medical Inspector C. E. H. Harmon, detached from the *Oregon* upon reporting of relief, and ordered to the naval hospital, Yokohama, Japan, as the relief of Surgeon F. Anderson.

Surgeon Frank Anderson, detached from the naval hospital, Yokohama, Japan, upon reporting of his relief and ordered home to wait orders.

Surgeon P. Leach, detached from the *Yosemite* upon reporting of relief, and ordered to the *Oregon*

Surgeon P. A. Hesler, detached from the naval hospital, Chelsea, Mass., upon reporting of relief, and ordered to the *Yosemite* as the relief of Surgeon P. Leach, sailing from San Francisco via *Doric* June 20.

P. A. Surgeon G. D. Brownell, detached from the naval training station, Newport, R. I., upon reporting of his relief, and ordered to naval hospital, Chelsea, Mass.

Asst.-Surgeon C. H. DeLancy, detached from the naval hospital, Washington, D.C., and ordered to the naval training station, Newport, R. I.

P. A. Surgeon J. F. Leys, ordered to temporary duty on *Franklin.*

Surgeon G. M. Pickrell, detached from the naval station, C. P. I., and to naval hospital, Yokohama, Japan.

#### APPOINTMENT.

Charles N. Fiske, to be an assistant-surgeon from May 15, 19

#### DEATH.

P. A. Surgeon Horace B. Scott, retired, May 29, 1900.

### MARINE-HOSPITAL CHANGES.

Official list of the changes of station and duties of commissio and non-commissioned officers of the U. S. Marine-Hospital for the seven days ending June 14, 1900.

Surgeon S. D. Brooks, granted leave of absence for 3 days June 25.

Surgeon P. M. Carrington, directed to proceed to Charle W. Va., for special temporary duty.

Surgeon W. P. McIntosh, granted leave of absence for 28 from June 19.

Surgeon T. B. Perry, relieved from duty at Baltimore, Md., from special temporary duty at Atlanta, Ga., and directed to ceed to Mobile, Ala., and report to medical officer in command temporary duty and assignment to quarters, assuming tempora charge during absence of medical officer.

P. A. Surgeon M. J. Rosenau, directed to proceed to Reedy quarantine for special temporary duty.

Asst.-Surgeon Taliaferro Clark, granted leave of absence for days from June 13

Asst.-Surgeon W. C. Billings, directed to proceed to Charlestow W. Va., for special temporary duty.

Asst.-Surgeon Dunlop Moore, relieved from duty at Portlan Ore.; directed to proceed to Dutch Harbor, Alaska, and assu command of the service at that port.

Asst.-Surgeon D. H. Currie, directed to proceed to Charlesto W. Va., for special temporary duty.

Acting Asst.-Surgeon F. B. Adams, granted leave of absence fo 8 days from June 12.

Acting Asst.-Surgeon Alta F. Cook, granted leave of absence fo 10 days from June 12.

Acting Asst.-Surgeon M. V. Safford, granted leave of absence 14 days from June 26.

Acting Asst.-Surgeon W. C. Todt, granted leave of absence for 10 days from June 3.

Hospital Steward W. F. Schlaar, directed to proceed to New York City, and report to Surgeon L. L. Williams, Immigation Station, for special temporary duty.

Hospital Steward G. W. Iltis, relieved from duty at Cleveland, Ohio, and directed to proceed to San Francisco, Cal., and report to medical officer in command for duty and assignment to quarters.

## Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

#### Philadelphia Medical Journal, June 16.

1.— Angina Pectoris. Clifford Allbutt.
2.—*Experimental Study of Origin of Epidemic of Tetanus following July 4, 1899; Report of Case with Recovery. H. Gideon Wells.
3.—*Necessity for State Aid in Treatment of Consumptive Poor. Howard S. Anders.
4.—*Case of Hereditary Ataxia with Generalized, Bilateral, Choreiform and Athetoid Movements. Bernard Oettinger.
5.— Contribution to the Study of Exophthalmic Goiter. Alfred Gordon.

#### New York Medical Journal, June 16.

6.—*Technique of Modern Uranoplasty. James F. McKernon.
7.— Perimetric Diagnosis (to be continued). J. W. Sherer.
8.—*Typhoid Infection of Uterus. August J. Lartigau.
9.—*Hernia Abdominalis. H. A. Duemling.
10.—*Case of Tetanus Treated with Antitetanic Serum. James F. Clarke.
11.—*Juvenile Hysteria and Neurasthenia. Charles L. De Merritt.

#### Boston Medical and Surgical Journal, June 14.

12.— Realism in Medicine. A. T. Cabot.
13.— Closing Statement for Remonstrants to Massachusetts House Bill No. 917, Entitled "An Act for the Further Prevention of Cruelty to Animals," before Joint Committee on Probate and Insolvency. Harold C. Ernst.
14.—*Mechanics of Lateral Curvature of Spine. Robert W. Lovett.
15.—*Malaria and Mosquitoes. Irving C. Rosse.

#### Cincinnati Lancet-Clinic, June 16.

16.—*Theory of Production of Tuberculosis. H. H. Spiers.
17.—*Fistula. Geo. B. Evans.

#### Medical News (N. Y.), June 16.

18.—*Prophylaxis and Control of Leprosy in this Country. Prince A. Morrow.
19.— Periods in Gynecology. Henry J. Garrigues.
20.— Case of Confinement Following Supposed Double Ovariotomy and Complicated by Intestinal Hernia Through Old Laparotomy Wound. C. Henry Leonard.

#### Medical Record (N. Y.), June 16.

21.—*Occurrence of Mould in Stomach and its Probable Significance. Max Einhorn.
22.—*Diffuse Septic Peritonitis and Elevated Head and Trunk Posture. A Report of Three Additional Consecutive Cases of Recovery. George R. Fowler.
23.—*Disease of Thoracic Division of Sympathetic Chain. Joseph Fraenkel.

#### Medicine (Detroit, Mich.), June.

24.—*Rumination and Periodic and Habitual Vomiting. Fenton B. Turck.

25.—*Maternal Impressions. Jas. G. Kiernan.
26.—*Repair of Old Traumatic Nasal Deformities. J. Holmer Coulter.
27.—*Ether Anesthesia from a Medical Standpoint. Louis F. Bishop.
28.—*Talmudic and Jewish Medicine. Lawrence Irwell.

**Medical Review (St. Louis, Mo.), June 9.**

29.—*President's Address. W. W. Keen.
30.—*Conclusion Reached after a Study of Typhoid Fever Among American Soldiers in 1898. Victor C. Vaughan.

**Southern Medical Journal (La Grange, N. C.), May.**

31.— Acute Entero-Colitis: Treatment. E. T. Dickinson.
32.— *Clinical Report of Ten Cases of Erysipelas.* J. W. P. Smithwick.
33.— Neurotic Dysmenorrhea. J. W. P. Smithwick.
34.— Malaria and the Germ. S. Scruggs.

**Cleveland Medical Gazette, June.**

35.—*Progress of Some of the Present Demands of School Hygiene in the Cleveland Public Schools. Leigh A. Baker.
36.—*Ligatures and Sutures in Abdominal Surgery. Hunter Robb.
37.— City Mortality of 1899. H. E. Handerson.
38.— Podalic Version vs. Forceps Delivery. D. S. Hanson.

**Louisville Monthly Journal of Medicine and Surgery, June.**

39.— Chronic Appendicitis: Operation Followed by Intestinal Obstruction, Necessitating Secondary Operative Intervention. A. Morgan Cartledge.
40.— Rational Therapeutics of Typhoid Fever. R. Alexander Bate.
41.— Report of Surgery (continued). H. Horace Grant.
42.— Bacteriology and Its Relation to Public Health. Chas. T. McClintock.
43.— Some Observations on Lithemia (concluded). Arch Dixon, Jr.
44.— Typhoid Fever. J. S. Hardy.
45.— Thiosinamine. Thomas S. Lewis.
46.— Report of a Few Clinical Cases. G. F. Payne.
47.— Clinical Report of Two Cases of Poliomyelitis Anterior Acuta. O. A. Kennedy.

**American Journal of Surgery and Gynecology (St. Louis, Mo.), May.**

48.— Appendicitis: A Clinical Report. Edwin Walker.
49.— Newer Cystoscope with Supplemental Device for Urethral Catheterization. J. Rilus Eastman.
50.— Surgical Correction of Talipes Equino-varus. Wm. V. Morgan.
51.—*New Operation for Permanently Restoring a Dislocated Kidney to Its Normal Situation. Frank C. Ferguson.
52.— Blood-Letting, Followed by Intravenous Transfusion of Normal Saline Solution in Treatment of Toxemia, with Report of Two Cases. Miles F. Porter.
53.—*Appendicitis at Distance from the Surgical Centers. W. H. Link.
54.— General Remarks on Vaginal Hysterectomy. Byron Robinson
55.— Report of a Uterine Fibroid of Large Size Successfully Removed. R. E. Haughton.

**The American Practitioner and News (Louisville, Ky.), May 15.**

56.— Address before Kentucky State Medical Society. William Bailey.
57.— Remarks on X-Ray "Burns" with Report of Cases Seen. Thomas L. Butler.
58.— Conservative Surgery: With Report of Case. J. C. Walton.

**Maryland Medical Journal (Baltimore), June.**

59.—*Certain Changes in Vessels, and Vascular Coats of Eye which are of Diagnostic and Prognostic Value in General Disease. G. E. de Schweinitz.
60.— Case of Chronic Sarcoma. Hiram Woods, Jr., and J. J. Carroll.
61.— Septic Thrombosis of Lateral Sinus. Report of Case, with Recovery after Operation. Preliminary Report. Harry Friedenwald.

**Illinois Medical Journal, June.**

62.—*Tendencies of Modern Medicine. Harold N. Moyer.
63.—*Selected Topics in Connection with Pathology of Delivery. J. Clarence Webster.
64.—*Application of Forceps. J. E. Allaben.
65.— Technique of Version. J. F. Percy.
66.—*Cesarean Section and Porro's Operation. Charles B. Reed.
67.—*Symphysiotomy. Geo. N. Kreider.
68.— Report of the Fourth Illinois Volunteer Infantry in War with Spain. T. M'Cord.

**New England Medical Monthly (Danbury, Conn.), June.**

69.— Report of a Rare Case. Frank P. Clark.
70.— Pathology of Lobar Pneumonia as a Basis for Treatment. Andrew H. Smith.

## AMERICAN.

2. **Tetanus.**—*Wells reports a case of tetanus, occurring* during the epidemic of that disease in July of last year. The patient was treated with tetanus antitoxin, a few doses of carbolic acid being given toward the close of the disease, but it was impossible to determine the value of these measures. On admission of the patient to the Cook County Hospital, excision of the wound, including all the tissue within one-half inch of its surface, was practiced under surgical antisepsis, and Wells credits the mildness of the attack largely to this measure. Culture and inoculation experiments were made from this case, but the tetanus bacillus was not found, though some anaerobic forms, which caused confusion, were present. Some studies were made of blank cartridges to see if the tetanus bacillus could be found on them, but with negative results.

3. **Care of the Consumptive Poor.**—Anders' paper is a plea for state aid in the care of indigent victims of tuberculosis. He reviews the subject historically and shows how little has as yet been done. The needy consumptive has the same claim to state aid as the blind, feeble-minded, etc., and he believes that every state in the Union should have a tuberculosis bureau, and that there should be a national bureau at Washington.

4. **Hereditary Ataxia.**—Oettinger describes a case characterized by slight mental defect, muscular paresis with undeveloped musculature and partial reaction of degeneration, ataxia of cerebellar type and generalized bilateral, choreiform movements which at times became athetoid. While the case is called one of hereditary ataxia, the patient does not appear to have had direct or collateral hereditary relations, the father, though intemperate, being said to be in good health, and the mother healthy. The other living children are all apparently well. The general subject of the disease is discussed with its pathologic theories and findings. The author believes that the cerebrum—including the cortex—the cerebellum and the spinal cord are all involved and that the prognosis is bad. The voluntary movements received benefit from small doses of bromid, and gain in weight was also noticeable.

6. **Uranoplasty.**—The operation described by McKernon consists in a preliminary tracheotomy, the introduction of the tube through which the anesthetic is given, the palatal operation succeeding this without interference with respiration, and treatment as in case of any other wound by packing or dressing. The tracheotomy tube is left in for eight or ten days, and nourishment is given entirely by the rectum. Preliminary to the operation he corrects any conditions of lymphoid hypertrophy in the pharynx or vault, enlarged tonsils, etc., thus preventing trouble from hemorrhage during the operation. If the inferior or middle turbinated bones encroach on, or fall into, the cleft, their pendent portions are also removed, some time prior to the uranoplasty. The method of operating is described in full and four cases are reported. He calls attention to the closure of the hard and soft palate, and also any lip operation which may be required at one sitting, provided there is no contraindication in the patient's condition. The most favorable time for the closure of these clefts is during the first two to four years of life, as there are then better prospects of normal speech. The removal of the sutures must be governed by local conditions. The advantages of this method are: complete restoration of the speech function; the possibility of eating without regurgitation of food; relief of the necessity of facial contortion while speaking; improvement of condition of the face and nose, and of deafness when existing, and general improvement in the patient's condition.

8. **Typhoid Infection of Uterus.**—Lartigau reports two cases of typhoid infection of the uterus, thoroughly examined bacteriologically, which, unlike previously published cases, occurred in non-puerperal women. One occurred in the course of typhoid fever and the other as an uncommon focus in a case where the chief interest was centered in the absence of any anatomic lesions of the intestines. In both, the source of infection lacks obvious demonstrable evidence, but he thinks it not improbable that the source of both was from within. In the second case, the presence of typhoid bacilli in the urine is important.

9. **Abdominal Hernia.**—*Duemling discusses the methods* of formation of abdominal hernia and its treatment, and concludes with the following deductions: 1. A hernia is the escape of a viscus from the abdominal cavity covered with the structures peculiar to its point of exit. 2. The folds and depressions of the peritoneum, occasioned by the passage of various structures under it, create weak points in the belly wall. 3. The success of a radical cure depends on the restoration of the muscular and fibrous tissues to their pristine relationship and elasticity. 4. The production of scar tissue, artificial or accidental, lessens materially the possibility of a permanent cure. 5. Destruction of the inguinal canal and suture of the external abdominal ring do not prevent recurrence. 6. Destruction of the inguinal canal and of the internal abdominal ring, or its fortification, offer the largest percentage of cures.

10. **Tetanus.**—The case here reported as treated with antitoxin, seemed unusual to Clarke because it occurred in a thoroughly drained and antiseptically treated wound. The use of the antitoxin appeared to relieve the general convulsions and relaxed the spasm of the temporal muscles, but death occurred unexpectedly, the pulse failing before the respiration. He considers it unfortunate that the serum was not obtained more promptly and believes that its delay may have contributed to the fatal result.

11. **Juvenile Hysteria.**—De Merritt calls attention to the condition of hysteria in infancy, and says that the majority of adult cases have an insidious beginning in childhood, through the bad effects of environment, and the methods of school and home training, etc. He enumerates the symptoms which he thinks are commonly ignored, viz.; nocturnal terrors, marked insomnia, irritability, tendency to lie without reason, masturbation, fits of crying and passion, feigned illness, undue love of sympathy; all of which may be detected in the juvenile sufferer and differentiated from the unruly disposition of a healthy child. He thinks that drugs play a secondary part in the treatment. tonics and blood restorers being useful, and sedatives helpful occasionally in tiding over especially irritable periods. He doubts the wisdom of ordering cessation of study in slight cases, as it deprives the child of the companionship and social friction with other children, which have a curative effect.

14. **Lateral Curvature of Spine.**—This subject is summed up by Lovett as follows: Torsion and side flexion of the spine are parts of one compound movement and neither exists to any extent alone. Lateral deviation of any part of the spinal column is therefore necessarily associated with torsion (rotation) at the seat of the deviation. In flexed positions bending is associated with torsion in one direction, in extended positions by torsion in the opposite direction. In this it follows simply the mechanical law governing flexible rods, which rotate in general in the same way in corresponding positions. From the kind of torsion observed in scoliosis it is obvious that the deformity originates in the flexed position of the spine. The correction of the rotation would therefore seem to be logically made by throwing the spine into extended positions and in taking side bendings from extended positions. Sitting in the flexed position by school children is likely to be harmful, and sitting in a twisted position of necessity induces lateral deviation temporarily. The immediate cause of lateral deviation is, as a rule, to be found in some asymmetry of development or posture which leads to an oblique direction of superincumbent weight, causing the spine to deviate from the middle line.

15. **Malaria and Mosquitoes.**—Rosse is skeptical as to the part played by mosquitoes in malaria, and gives his experience in various malaria-infected regions in support of his views.

16. **Tuberculosis**—Spiers thinks that consumption is a constitutional and not a local disorder, and that it depends largely on imperfect aeration of the blood.

17. **Fistula.**—After a historical sketch, Evans gives the opinion that there is no cure for fistula except by cutting. Where he has a patient showing a well-established complete fitula, he carefully dissects it with a probe-pointed director, looking carefully for a branch or branches. If the director fails to enter the rectum, he pushes it through and then hunts for an internal opening. The tract is then thoroughly cleaned out with a curette and loosely packed with gauze, which is removed every day, if necessary, until the wound is healed. If the case is one in which there is a complete fistula on either side of the gut, he is careful to cut the sphincter but once, and then makes the tract on the other side quite large, so that he may be able to pack the second tract with ease and heal the wound from the bottom. In superficial fistula, he follows the plan advised by Kelsey, viz., after the second or third day, to discard all packing with gauze and simply keep the rectum clean and insert the finger into the rectum. The relation of fistula to tuberculosis is discussed. He believes that in these cases much can be done by palliative treatment and a cure often produced. He says to let acute phthisical cases, especially those with bad cough, alone, or at least let the work be simply palliative; but in all chronic cases under favorable circumstances, to attempt a cure. After the operation, he advises all the fresh air and sunlight possible, a liberal supply of milk, cream and tincture ferri chlor., and driving in the country, the patient being well protected against cold.

18. **Leprosy.**—Morrow calls attention to the increase of leprosy and the probable risk of greater increase through our extensive commercial relations with leper-producing countries. He thinks that it will be necessary for the general government to take charge of this disease, which he believes is slowly gaining ground in this country. The popular fear of the disease he considers unwarranted; he does not believe that every leper should be seized and confined, but that colonies should be formed where the patients can be made comfortable, and self-supporting, if possible, and be under the care of a qualified expert. If treatment is begun early he thinks that there might even be hope of cure.

21. **Mould in the Stomach.**—Einhorn describes a number of cases where mould was found in the stomach. He finds the fungus particularly in two groups of gastric affections; in cases of intense hyperchlorhydria occasionally with hypersecretion and vomiting, and in gastralgia with normal or reduced gastric secretion. Improvement attended washing out the mould with gastric lavage, followed by spraying of .0001 to .0002 solution of nitrate of silver, but he can not say with certainty that this treatment was the cause. Still he thinks the presence of mould in large quantities in the stomach is important from a therapeutic point of view, and the best method of getting rid of it is by gastric lavage in the fasting state, followed by a nitrate of silver spray.

22. **Diffuse Septic Peritonitis.**—This paper is presented as an addendum to the report of nine consecutive cases of recovery of diffuse septic peritonitis, published in the *Medical Record* for April 14, the three here given making twelve consecutive cases in which recovery has taken place under the following combined treatment; by cleansing the neighborhood of the original focus with hydrogen peroxid, thorough flushing of the abdomen with decinormal saline solution at 110 F., deep pelvic drainage and the elevated head and trunk posture to facilitate the passage of fluids from the intestinal and diaphragmatic areas to the pelvic portion of the peritoneum. The special object to be accomplished by this posture, the removal of the fluids from the dangerous areas mentioned to the comparatively safe region of the pelvis, is given in his previous article. In spite of the fact that this elevated posture apparently throws more work on the heart in the desperate cases, Fowler does not find this a valid objection to its employment. In case the patient fails to respond to stimulation employed after operation, there would be no objection to placing the bed in a horizontal position or even elevating the foot of the bed during the first few hours, provided the periteneal cavity has been cleansed. Unless persistent and progressive failure of circulation is observed, in spite of the strychnin and caffein combined with whisky, and saline enemas, it is better to place the patient in the elevated head and trunk posture from the commencement, since this secures early cessation of vomiting and the prompt expulsion of flatus.

23. **Disease of the Thoracic Sympathetic.**—Fraenkel describes a case of a woman 37 of age in whom the symptoms were strongly hysterical and the diagnosis obscure. While there was a suspicion of sympathetic involvement, it could not be determined. Her death took place very unexpectedly and the post-mortem showed a pus collection around the first four of the thoracic sympathetic ganglia of the left side and the intervening trunk, and the inferior cervical ganglion of the right side. The diagnosis was subpleural abscess, involving the left second and third thoracic sympathetic ganglia and a thin capsule of pus enveloping the right inferior cervical ganglion; localized apical acute fibrinous pleurisy, and pulmonary edema. The symptoms are such as might occur in what has been considered hysteria, and whether death can result from this condition is one of the questions yet in debate. He does not believe that any organic disease of the brain or cord can be invoked, and suggests the following questions: 1. Are the last scenes of the clinical picture necessarily a con-

tinuation of the first act, or mere expressions of the accidental localization of the given anatomical lesion, and in no connection with the original symptoms for which the patient sought relief? 2. Supposing the above clinical picture to be a continuous one, is there any causal relationship between the clinical symptoms and the gross anatomical findings? In the present state of our knowledge of the anatomy and pathogenesis of hysteria, and the anatomy and physiology of the sympathetic, it would seem very dangerous to attempt to answer these questions without thorough and extensive study, which, however, must be postponed for another occasion. For the present, it is best to accept the verdict of the Roman judges, "n. l.," *non liquet.*

24. **Rumination and Periodic Vomiting.**—The chief characteristics of the symptom of rumination are given by Turck as: A subconscious habit which closely simulates volitional movement; a pathologic condition acting in connection with the pneumogastric nerve in a reflex way; the power of suppressing the act at the expense of some distress. The habit exists in persons of neuropathic constitution, the suppression by will-power being often followed by increased activity of the habit, and, in some cases, headache and hiccough. It is often associated with gastro-intestinal disorders and diseases of the liver, kidneys and pelvic organs. In cases that came under his observation, diseases of one or more of the abdominal organs antedated the rumination habit, but it was not always possible to say how far they were responsible for the condition. In every case peripheral irritation of the vagus should be looked for and corrected by local and general treatment, it being not unfrequently dependent on splenic congestion in connection with some of these disorders. Among the cases reported is one of intermittent regurgitation and periodic spasm with chronic gastritis that was relieved by intragastric electrization, disinfection of the stomach and stomach gymnastics. There was also one of constant regurgitation with gastritis, and one of rumination with atrophy of gastric glands combined with prolapse and slight dilatation. Periodic and habitual vomiting is also discussed and two cases are reported. In the first, marked splenic congestion was the earliest symptom, followed by abdominal pain of increasing intensity, and finally all the symptoms of profound shock. It fell under the head of the periodic vomiting of Leyden, which is characterized by regular recurrence of hematemesis during apparent health. Morphin alone relieved the condition. The second case was a rather peculiar one, dating back 2½ years, and occurring at intervals of about three weeks, as a rule, though longer periods have elapsed between attacks. There was no pain nor shock, but little nausea, and the appetite during the attacks was variable. The diagnosis was interstitial atrophic gastritis with interstitial hepatitis and chronic nephritis, the vomiting being dependent upon these conditions. The urine showed traces of albumin. In this case, there was much improvement under regulated diet, with hot sitz baths, gastric lavage at the temperature of 113 F., and the stimulation of the stomach by the gyromele and electricity, and mild laxatives. The patient has gained twelve pounds under this treatment, and there is general systemic improvement, and the attacks of vomiting have become less frequent.

25. **Maternal Impressions.**—Kiernan discusses the popular belief in regard to this subject and concludes that maternal shock has an influence on the fetus beyond a doubt, but its method of action and its results must be determined by an analysis of the various existing conditions. The influence of mental shocks must be taken into account though they can not produce the photographic consequences popularly ascribed to them. The nutrition of the mother also may act on the fetus, but the facts which can be thus explained give no support to the view of maternal impressions as popularly entertained.

26. **Nasal Deformities.**—Coulter illustrates cases of pronounced nasal deformities relieved by operation, the details of which he descibes.

27. **Ether Anesthesia.**—Anesthetization is divided into three stages by Bishop. During the first the patient, physicians, friends and nurses are all participants. In the second, the patient is comatose, the friends are gone away, the nurses and surgeons are abstracted with their work and the anesthetizer is completely in command of the field. During the third stage, the physician has departed, the patient is recovering from the anesthesia, and the sympathizing friends have returned. During the first stage, there is much to be done; the anesthetizer should examine the patient's heart to learn about the previous anesthesias, inquire about false teeth, etc., and prepare the patient without causing any fright. A very useful method is to saturate the cone thoroughly with ether and then assure the patient that you will not commence to administer it until he has become accustomed to the odor. Hold the cone about ten inches above the face and keep it thoroughly saturated; the ether vapor, being heavier and colder than the air, will fall directly on the patient's face and he will stand the sensation better than if it be closely applied. In this way he gradually becomes accustomed to it, and is somewhat under the effects of the anesthetic so that it may be lowered. In a nervous patient, it is sometimes helpful to let him hold the cone himself. As to the quantity to be given, no general rule can be stated, but commonly too much is used. There is one danger that has never been sufficiently emphasized, that is having the patient too profoundly anesthetized at some period of the operation. Bishop thinks that the bad effects on the body and kidneys may be accounted for in this way, and that a careless operator may easily make this mistake. The anesthetizer must examine from moment to moment the vital condition of the patient and not be intimidated by the surgeon into acting contrary to his best judgment. A surgeon should not ask an unqualified anesthetizer to administer an anesthetic and should not interfere while it is being done. The routine practice of doing something to keep the tongue out of the throat is entirely unnecessary, as it rarely gives any trouble; but if it falls back, it is generally sufficient to elevate the angles of the jaw in the usual way. In rare cases, a further method is to use tongue forceps. Much of the obstruction caused by the mucus in the throat can be avoided by turning the head on the side, but this will never become dangerous unless the anesthesia has been made too profound. During the stage of recovery, the chief annoyance is the nausea, and Bishop thinks that this may be due to too deep anesthetization. It certainly is a nervous phenomenon.

28. **Talmudic Medicine.**—Irwell's article is an interesting historic sketch of Jewish medicine in the early and middle ages, being as he says, an attempt to give facts that do not appear to have found their way into print in our language.

29.—See The Journal of June 9, p. 1445.

30.—Ibid., p. 1451.

35. **School Hygiene.**—The results of the inspection of the children in the schools of Cleveland are given by Baker in detail. They include many cases of partial deafness, curvature of the spine and neurasthenic symptoms, to which special attention has been called. The personal hygiene of pupils and the hygiene of instruction has also received attention. He believes that children do just as well if they have five minutes of good wholesome exercise at the close of a long recitation and that the physical development of the pupils will more than pay for the time and trouble. The questions that are discussed are the physical education, buildings, ventilation, sewage, etc., and he points out the needs of the school system from a sanitary and hygienic point of view.

36. **Ligatures and Sutures.**—Robb thinks that the cumol method is the best one for sterilization, if it is to be done by the surgeon. He has had good results with catgut contained in sealed glass tubes prepared by Kiliani, Van Horn, and St. John Leavans, of New York. The only criticism of the chromicised catgut is that in some of the larger sizes it does not become absorbed, but gradually works its way to the surface and is cast off. Lately, he has abandoned the use of the chromicised catgut and employs the silver wire for bringing together the fascia in closing the abdomen. It is a great mistake, he says, to buy large quantities of catgut on reels, as it is far preferable to use the sealed tubes with small quantities in each. Chinese silk twist is easily sterilized

in the Arnold steam sterilizer, the autoclave, or by means of boiling water. He has four sizes, according to the use required: No. 3, quite fine, for intestinal sutures and for carriers for the needles; No. 4, where greater strength is required, as in suspension of the uterus and the ligation of small pedicles; No. 6, for tying off the majority of ovarian pedicles; No. 7, very heavy, for hysterectomy or when large masses of tissue have to be ligated. Silver wire is used as buried sutures in uniting the abdominal fascia, the metal exercising a direct germicidal effect. The wire remains buried in the tissue, rarely causing any trouble provided the ends are turned down so as not to scratch the skin. It can be easily and thoroughly sterilized and in only one instance has he had to remove a silver wire ligature.

51. **Dislocated Kidney.**—The operation here described by Ferguson is as follows: 1. After due preparation and anesthesia the surgeon proceeds to make an incision into the peritoneal cavity, commencing just below the twelfth rib, just external to the rectus muscle, and extending downward to a point opposite the umbilicus. After all bleeding has ceased the right hand is introduced into the peritoneal cavity. Having verified the diagnosis, he then palpates the gall-bladder, the appendix, the opposite kidney, and, if the patient is a woman, the ovaries and tubes. 2. The wound is then packed with sterilized gauze to prevent the escape of the intestines, the patient is turned on the side and the usual incision for nephropexy made below the twelfth rib down to the peritoneum. 3. The gauze is then removed from the abdominal incision, and the surgeon, standing with his face toward the feet of the patient, introduces the left hand into the abdominal cavity and pushes the kidney into its normal situation. An assistant with a tenaculum or other suitable instrument grasps the kidney through the wound in the loin, and holds the organ steady and firmly *in situ.* The surgeon with his finger pushes the peritoneum beneath the inferior portion of the kidney into the wound, where it is secured by a row of chromicised catgut sutures, which are carried successively through the muscles, the peritoneum, and capsule of the kidney and out through the posterior wound. These interrupted sutures are continued up each side of the kidney as far as the ureter and tied securely. The wounds are then closed, the usual dressing applied and the operation is complete. It will be observed that a pocket has been made of the parietal peritoneum in which the kidney securely rests and from which it can not be easily dislodged.

57. **X-Ray Burns.**—X-ray burns belong to the category of things which should never occur except as an intentional therapeutic agent. Butler reviews the different opinions in regard to the mechanism of these burns and reports a number of cases that have come under his observation, two of which occurred in his own practice. In his case, he says he has no excuse to offer, as they were very difficult subjects and the tube was placed too near the patients. Since these occurred he has had many cases of exposure, but no accidents. Most of those here reported occurred among the employees of electrical firms, though one was of his own experience. He believes that proper treatment hastens recovery from these wounds very considerably. Those of the first degree are benefited by the continued application of ointments, especially those having a lanolin base. Various ointments and drying powders increase the amount and thickness of necrotic membrane in burns of third degree. Hot, moist, mildly antiseptic dressings used early in burns of second and third degree help to limit the extent of ulceration, and when used late help to hasten the process of repair. Skin-grafting at the proper time is indicated, contrary to the teachings of some.

59. **Ocular Changes and Their Diagnostic Relation.**—De Schweinitz summarizes his paper as follows: "1. Flitting conjunctivo-episcleral congestions may be the only symyptoms of masked gout. 2. Such congestions may be the prodromes of later gouty manifestations in the eye or elsewhere in the body, but also—and most importantly—may be the forerunners, associates or alternates of retinal vessel changes, which, in their, turn, are the indications of general arteriosclerosis of serious prognostic import. 3. The same conclusion applies to recurring subconjunctival and recurring subcutaneous palpebral hemorrhages, which seem, however, to be related especially to the chronic form of nephritic, exactly as is the classical retinitis. 4. Inflammation, hemorrhage, and edema, with exudation, are not necessarily the ophthalmoscopic signs of general arterial disease or of its special localization in certain organs, for example, the kidney. It may be manifested with perhaps equal frequency by alterations in the walls of the retinal arteries and changes in the course and caliber of the veins, together with signs of mechanical pressure where veins and arteries cross. 5. These retinal-vessel changes may be present when ordinary physical examination does not reveal the signs of the endarterial change in the surface vessels of the body generally."

62.—See abstract in THE JOURNAL of June 2, p. 1412.

63.—Ibid., p. 1413.

64.—Ibid., June 2, p. 1414.

65.—Ibid.

66.—Ibid., p. 1415.

67.—Ibid., p. 1414.

## FOREIGN.

### Revue de Gynecologie (Paris), January-April.

**Suspension of Fibromatous Uterus During Hysterectomy.** A. REVERDIN.—Suspension of the uterus to lift and thus do away with the weight of the tumor in the course of hysterectomy is recommended by Reverdin as an indispensable aid in operating. A pulley is fastened to the ceiling, over the table, and an assistant holds one end of the cord passing through it, while a forceps or double corkscrew arrangement is suspended from the other end. When a large solid tumor is exposed, it is firmly grasped with the forceps, and the assistant, by gentle, gradual, continuous traction, lifts and holds it as desired, so that the operator has to attend only to freeing the adhesions. The traction brings the organs well into the field and facilitates the task of removal and suturing; and there seems to be less tendency to hemorrhage, possibly owing to the traction on the vessels. The necessity of handling the tumor or the adjacent regions is very much reduced, thus diminishing the danger of infection and materially shortening the time required for the operation. The ease with which the fibromatous mass is tipped from side to side is also a great advantage. A sheet moistened with a disinfectant is hung over a horizontal frame above the pulley, to prevent any dust from dropping on the patient. Reverdin uses suspension in applying casts, in resecting the rectum, in various operations on the peritoneum, vulva and uterus, and even in applying dressings, and affirms that he can not do without it now. His operating-table is a light frame with three wide, removable slides for the top. The head of the table rests on a metal stand, which forms part of the chair for the anesthetist. The foot of the table is placed on a stand, or is suspended from the ceiling by a chain and safety clamp, which allows it to be raised at any angle. The patient's feet rest in folding metal supports, which are suspended from a band across the shoulders of the attendant who carries the foot of the table, and is thus between the patient's feet. After the operation the table is lifted and placed on the bed, the slides are slipped out from beneath and the frame lifted off separately, leaving the patient in bed without having been moved.

**Dangers of Incomplete Hemostasis.** P. REBREYEND.—One of the chief questions discussed at the recent congress of gynecology at Amsterdam was the relative value of antisepsis and of perfection in technique as demonstrated in the results of gynecologic operations. Rebreyend observes that although failures in antisepsis may be the most threatening at first, faults in technique are what transform the menace into a catastrophe. Among these faults he says that there is none more serious than incomplete hemostasis, especially in operating on the peritoneum. He describes five instructive cases in which only the vessels that bled were tied, and a slight oozing of blood and accumulation of clots—not more than 200 gr.—caused serious disturbances, that resulted in death in three of the cases.

**Treatment of a Fistulous Opening Between the Colon and Vagina.** X. DELORE.—A patient was cured of a colovaginal anus by incising the rectovaginal septum and carrying the incision up to the seat of the fistula near the sigmoid flexure. The adherent portion of the colon was then detached and mobilized, and the anterior wall pulled down and fastened to the anus. The anterior wall of the rectum was correspondingly incised and united with the stretched anterior wall of the colon, thus forming a new and larger rectal cavity. The portion of the rectum above, intervening between the part forming the new rectal cavity and the colon, was excluded from the intestinal circulation and left as an arched tube, opening into the upper posterior portion of the rectal cavity by two mouths close together.

### Revue de Medicine (Paris), May 10.

**Functions of Thyroid Gland.** G. Gauthier.—The thyroid secretion, vitiated by an old or recent glandular lesion, is the true cause of the symptoms constituting what we call Basedow's disease. Everything tends to indicate that the vitiated, and hence injurious, substance affects first and chiefly the region of the medulla and pons, as most of the symptoms suggest a bulbar origin; but in addition to this action on the nerve-centers, the modified thyroid secretion also profoundly affects the organic interchanges. The phenomena caused by exaggeration of metabolism, such as fever, emaciation and nutritional disturbances, are the direct consequences of the chemical and medicinal action of the abnormal, toxic, thyroid secretion. Gauthier establishes, among other points, that normal thyroid products in the blood favor the mammary secretion and reduce utero-ovarian activity. He also affirms that there is a direct relation of cause and effect between the functional behavior of the thyroid body and that of the nervous system. The thyroid does not have merely symptomatic or reflex action, like that of the ovary and uterus, for instance, but has a direct and close influence on the development of the nerve-cells, and later, on their nutrition. All the pathologic conditions known as "nutritional" can be traced to defective action of the gland, and thyroid treatment may prove effective in curing them.

### Berliner Klinische Wochenschrift, May 14 to 28.

**Hemolysins.** P. Ehrlich and J. Morgenroth.—The recent research in regard to hemolysis, reported in this article, indicates the existence of a new factor in pathology, an internal regulating process which prevents injury from the absorption of morbid products. The introduction of the red corpuscles from one living being into another results in the formation of a substance—hemolysin—which dissolves the corpuscles of the species from which they were first derived. This destructive process is not limited to the corpuscles, but has been observed when various substances, spermatozoa, ciliated epithelium, etc., have been introduced into the organism of another species. Ehrlich calls the lysin produced after introduction of the blood-corpuscles from another species, "heterolysin," to distinguish it from "isolysin," or the lysin fabricated after introduction of corpuscles belonging to the same species. His experiments were with isolysins. About 900 c.c. of diluted blood from three goats were injected into the peritoneum of another goat, resulting in the formation of an isolysin which readily dissolved the corpuscles in the blood of a number of other goats, attaining its maximum power by the seventh day. It had no hemolytic power on the corpuscles in the blood of the same animal, and, therefore, was not an "autolysin." Numerous other experiments were made, always with negative results; it was impossible to obtain an autolysin in any case. The conditions in these experiments were practically the same as when a hemorrhage into a cavity is absorbed by the organism, which, we know, is not followed by hemolysis of the corpuscles in the rest of the blood. No autolysin is formed unless in most exceptional circumstances. According to Ehrlich's theory regarding hemolysis and the almost identical process of bacteriolysis or immunization, each cell consists of a number of groups, each group susceptible to a different stimulus. These hypothetical elements are the basis of his *Seitenketten* theory—a term he has borrowed from organic chemistry. In the process of immunization, the introduction of the foreign substance results in the fabrication of the immune, or between-body, which fastens the end-body—normally in the blood—to a certain group in the cells, for which he now proposes the term "receptors." If either of these factors are missing, lysis does not occur. When the receptors are present their combination with the blood results in the production of an antitoxin. Consequently, he assumes that the absence of an antitoxin indicates the absence of the specific receptors. Hemolysins produce normally an antihemolysin, and in these experiments on goats, the isolysins produced an anti-isolysin; that it was never possible to produce an anti-autolysin. This he accepts as proof of the absence of the specific receptors. The hemolysins also varied in their effects; one or two goats proved refractory to some and susceptible to others, and also susceptible to hemolysins derived from the pig, goose and rabbit. The impossibility of inducing the production of an autolysin suggests the practical conclusion that the secretions and excretions of a diseased organism are not necessarily toxic for that organism. Disturbances in the internal regulating processes, however, may bring this about. "We must take into account, henceforth, the disturbances in the internal regulation as a factor in pathology, and devote attention to it as much as to the influence of directly injurious exogenous or endogenous substances."

**Derivation of Oxalic Acid.** E. Salkowski.—The writer's experimental research on dogs seems to prove that oxalic as well as uric acid is a product of metabolism, and that it is derived from nuclein, especially nuclein-albumin. Persons with a tendency to excessive excretion of oxalic acid or to the formation of concrements of calcium oxalate in the bladder, should avoid food containing much nuclein. The acid was detected in a few specimens of beef bile; if it occurs also in human bile, ingestion of calcareous mineral waters might prevent or diminish absorption of the acid from the intestines. The occurrence of alimentary oxaluria was also established, and this again imposes the necessity of avoiding food containing oxalic acid, which has been found in small amounts in meats, in liver, and in certain wines. Even small quantities, accumulating in the course of time in especially predisposed persons, may have troublesome consequences.

**Direct Bronchoscopy for Cancer of the Lungs.** G. Killian.—A carcinoma in a small bronchus, impossible to locate by percussion or auscultation, was discovered by direct bronchoscopy in a man 63 years of age. The neoplasm was not seen, but the bronchus leading to it was pointed out as the probable site; and this was confirmed by the autopsy. Killian has claimed for a long time that chronic focal affections of the lungs can be readily diagnosed by direct bronchoscopy. In the case reported, the shadows in radiographs were too faint to afford much information.

### Wiener Medicinische Presse, May 13.

**To Facilitate Cure of the Morphin Habit.** W. Deutsch.—A great step has been gained toward its complete suppression if a patient can be induced to take the morphin by the mouth instead of by subcutaneous injection, but many have an invincible aversion to this. Deutsch has found that the same result can be attained by substituting anal for subcutaneous injection. He describes two cases in which he obtained a rapid, voluntary cure by inducing the patients to use rectal injections of a more concentrated solution, which they found convenient and effective, but from which they easily weaned themselves later.

### Wiener Medicinische Wochenschrift, May 5.

**Hyperemesis of Pregnancy.** E. Dirmoser.—When chemical tests do not indicate serious involvement of internal organs, Dirmoser has been unfailingly successful in arresting the incoercible vomiting of pregnancy by a treatment consisting of absolute rest for the stomach, and efforts to transform the antiperistaltic movements into normal peristalsis. The stomach is washed out with a solution of boric acid or sodium bicarbonate and the nerves soothed with an injection of 1 cg. morphin and 10 cg. antipyrin in the epigastric region. The intestines are cleansed with Hegar's clysmata, and the patient is fed with nutritive enemata. A cold wet pack or cooling appliance is placed over the stomach, and, if gases form, a little charcoal may be administered. Twenty-four hours after the vomiting has subsided tea may be given occasionally. Abortion should never be induced until this treatment has been given a thorough trial.

### Gazzetta degli Ospedale (Milan), May 27 and June 3.

**Bone Marrow in Disease.** G. O. Zen.—This communication from Salvioli's institute of general pathology at Padua is based on the study of the femur in sixty-four observations. The presence of nucleated red corpuscles was accepted as evidence that the bone marrow was accomplishing its blood-producing function. In health or after rapidly fatal infectious diseases, the marrow of the long bones was found fatty and inert from a functional point of view. In infectious diseases with a protracted course, like typhoid, the blood-producing function was aroused and manifest by the end of the second week. This function was also constant in chronic infectious diseases, like tuberculosis. The marrow was found gelatinous in morbid conditions leading to cachexia and marasmus. Age has no influence on the arousing of the blood-producing function in the long bones, which seems to commence always in the upper portion and to extend downward.

**Pathogenic Action of Ascarides Lumbricoides.** P. Dematteis.—Worms obtained from a number of children between the ages of 3 and 14 years were examined and cultures made from the contents of the isolated intestines of the worms, showing that they contained the streptococcus pure, or a combination of bacilli: the coli, acidi lactis, erithrogenes, subtilis, mesentericus, pseudotyphoid, fluorescens, staphylococci, sarcina rossa and alba, etc., in variable proportions. Dematteis concludes that these germs may be inoculated into the mucous membranes by the mouth of the worms, producing various pathologic phenomena. The worms in their migrations may also carry these germs into portions of the body normally free from microbes. They may also prove pathogenic when evacuated by the worms in susceptible regions; and this, aided by the mechanical and toxic irritation of the invading ascaris, is probably the explanation of the abscesses in the liver in which a worm has been noted. Certain irregular forms of fever may be due to inoculations produced by ascarides which are reacquiring, to a certain extent, their old pathogenic importance.

**Forensic Importance of Glycogen in the Liver.** D. O. Modica.—Careful study of forty-six cadavers, at various intervals after death, showed the presence of sugar in more than 60 per cent. of the pathologic cases, ranging from a trifle less than .5 to 1 per cent. Glycogen does not always become transformed into dextrose immediately after death, but may persist unchanged for two days or even longer, if the cadaver is kept at a low temperature. The amount of dextrose in the liver after death depends on physiologic and pathologic individual conditions; it can not, therefore, be a criterion to decide whether death was due to traumatic or pathologic causes.

**Action of Poisons on Electric Excitability.** D. P. Vincenzo.—After studying the modifications of the direct and indirect electric excitability of frogs, in respect to the voluntary muscles, Vincenzo concludes that the elastic muscular substance possesses an excitability of its own, independent of the nervous system, and that this can be influenced by various poisons, some of which first exaggerate and then depress it—veratrin, caffein, quinin and spartein—while others diminish without first increasing it—cocain, strophanthus and digitalis. Some poisons of the first group, although they primarily affect the striped muscle fibers by modifying their excitability, in larger doses extend the paralyzing influence to the motor nerves in these muscles, and produce an effect similar to the primary manifestations of curare.

**Seroantitoxic Effect of Alcohol in Tuberculosis.** Mircoli.—Recent research by Büchner and others seems to indicate that alcohol confers an antitoxic power on human serum, similar to, but less intense than Maragliano's antituberculosis serum. Mircoli advises utilizing this power of alcohol to neutralize toxins in the treatment of tuberculosis, carefully avoiding an amount of alcohol that would damage the organism and excluding from treatment cases of mixed infection. Study of the relations between alcoholism and tuberculosis has convinced him that the prolonged use of small amounts of alcohol can not fail to have a favorable effect on the disease.

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Wilson, R. E., (104) 1476
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Wilson, W. H., (1) 1475
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Young, H. H., (75) 1182
Young, J. K., (21) 1182
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Zabludowski, I., (73) 924
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Zahorsky, J., (10) 482, (31) 548
Zeigler, A., (168) 1477 (33) 674
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